United States Department of the Interior

FISH AND WILDLIFE SERVICE

Klamath Field Office
P.O. Box 1006
Yreka, CA 96097-1006

April 19, 1990

Memorandum

TO: Klamath Fishery Management Council

FROM: Ron Iverson

SUBJECT: Draft minutes of the Management Council meeting held March 31 & April 1, 1990.

Attached for your review are minutes of the subject meeting held in Arcata and Eureka, California. I have followed each motion passed, assignment made, or other decision point with a line of asterisks.

Attachments

cc: Interested parties

NOTES ON THE MEETING
OF THE
KLAMATH FISHERY MANAGEMENT COUNCIL
HELD MARCH 31 IN ARCATA, CALIFORNIA
AND APRIL 1 IN EUREKA, CALIFORNIA

31 MARCH 1990, ARCATA, CA.

At 9:17 the meeting was called to order by Charlie Fullerton. (Craig Tuss substituting for Lisle Reed.) A quorum of members was present (see roster, Attachment 1).

Correction and approval of agenda and minutes.

Wilkinson moved to approve the agenda (Attachment 2). Bingham seconded. Approved.

Sue Masten corrected the minutes of the previous meeting to read: a) page 7, "if the stocks are this low, let's look at reducing the ocean fishery also" b) page 8, 2nd comment for Yurok should be that: 1) under .35 ocean harvest rate 2) 6500 fish in area 2, is a reduction of past harvest, and c) under Reeds comments it should read "re-address" not "redress".

Nat Bingham corrected the minutes at the bottom of page 25. The minutes should read that it passed by consensus with the Hoopa representative abstaining.

Bob Hayden wasn't listed as attending the meeting, and he did attend. Bob also said that the angling hours were changed "to reduce conflict with anglers" not "benefit" anglers.

Nat Bingham clarified (on page 25) that his concern for naturally spawning stocks and ceremonial needs should be part of his motion.

The "public comment period" on the agenda was discussed, three main areas of concern were identified.

1. Naming the people who comment in the Public Comment period in the minutes of the meeting.

2. Cards for people to write their name on, similar to the ones that PFMC uses.

3. Public comment periods available throughout the meeting on agenda topics.

Jim Martin made a motion to approve the minutes with the noted corrections, Keith Wilkinson seconded it. In the future, the Management Council will listen to public comments before taking action.
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The minutes from the in-river harvesters mtg were approved.
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Report on status of the PFMC process for management of 1990 salmon fisheries:

Frank Warrens reported that .35 -.40 is now the range. He read a few paragraphs that relate to the options from the PFMC "Proposed Commercial and Recreational Ocean Salmon Fishery Management Options for 1990" (Attachment 3), and he also read a paragraph on recreational fishing.

Discussion of Council Objectives:

(Fullerton): Made a motion to add these topics to the agenda as important objectives for this meeting:

1. Possible sale of indian caught fish to commercial trollers.

2. Make a recommendation to the state on spring run chinook in S. Fk. Trinity (this will have major impacts).

3. Make recommendation to PFMC on emergency changes in reduction in spawning escapement.

These objectives will result in recommendations to the PFMC.

Discussion by council members:

- (Martin): Reluctance to make recommendations on topics that council members aren't prepared for.

- (Masten): Feels that council members need to be aware of their positions, including tribal positions, especially because these are brought up at PFMC. Members need to be prepared w/ viable options.

The motion to add Charlie's concerns to the agenda was passed without objection.
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Discussion on Council objectives included:

- The recommendation made to the PFMC has been modified from the one that the KFMC gave... but this was appropriate. It is now up to the KFMC to try to narrow down its recommendation to PFMC on the ocean harvest rate. (Bingham, Masten, Martin).

- (Hayden): A question on the purpose of the KFMC because when representatives are on both the KFMC and PFMC it causes conflict, there needs to be a way to carry forward.

- The PFMC will continue to take the recommendation of the KFMC. Fullerton feels that he will continue to support the Council's position.

Council members agreed that they should let everyone know if they have to catch a plane or leave early from a meeting so that the placement of action-decisions on the agenda can be modified.

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Support on projected water situation and Central Valley Project operation, 1990 (Don Paff, Bureau of Reclamation).

Don Paff reported the bad news... the water outlook is dry. As in the past few years about 85% of runoff period is past, and we are way below the normal precipitation levels. Similar to '86, the intensity will vary by area, some areas will suffer more intensely, impacts to fish, wildlife, and agriculture will be significant. Don predicts that there will be rather severe impacts.

The impacts to agriculture could hit $1-2 million. When water is not sold, the Central Valley Project loses money, but the farmers still pay, whether or not they use the water.

This year's conditions will have dramatic impacts because of dry conditions in the past years. On March 9 the Bureau of Reclamation will update their prediction, and on April 12 they will make it official.

So far there is no late rain like there was last year. At this point the Bureau has declared half of the normal supply to contractors, some contractors will be recommended 75%, others 50-75%.

Given these circumstances, and the unlikelihood that conditions will change, here are the actions that the Bureau will take:

- Meet all discharge requirements.
- Meet agricultural needs as much as possible, but cutbacks will be made.

This is only the 2nd time in history of the Central Valley Project that shortages to the agricultural community will prevent them from getting full amount.

The bureau will coordinate with the State Water Project (SWP) to use water wisely, state also called 50% shortage, will bank water, manipulate releases, the word will be conservation for everyone. Don referred to his handouts-- the values provide a foundation for concern.

As of yesterday: the CVP (Bureau responsibility) operation of reservoirs was down. (Attachment 4, pg 5).

Highlights from Attachment 4.

The total storage in CVP in '89 was 7 mil acre feet. In '90 it is 6 mil af ... therefore nearly 1 mil af less water in storage.
Bureau of Reclamation is currently generating April forecast. Note the bar charts showing time periods of precipitation. Notice the end of March (Attachment 4, pg 4), 85% of precipitation time is over!

Bureau is feeling fairly confident of their forecast because most of the precipitation time is over. Basin snowpack give general ideas, all below what they were last year. Sacramento River index shows vagaries in run-off periods, this shows similarity to '87 & '88. The amount of water in the "bank", or reservoir storage, is dipping quite low. The Bureau likes to start year with 7 mil af. Reliance is based on 90% of the time, the water supply should be better than estimated... appropriate to be conservative.
Note that the last 3 years have had diminishing storage, if this continues, the Bureau will be "bankrupt".

Forecast on Trinity releases in water year 1990 could lead to possible difficulties.

- The water year has been changed to begin April 1 instead of January 1 for the Trinity. Sunday, April 1, 1990 will begin the water year.

- At yesterdays meeting, the FWS stated that 340,283 af is critical for Trinity fish needs and 12-year flow study needs in 1990.

- It is possible to minimize impacts to the entire water community. Paff welcomes suggestions and creative ideas.

<u>Question and Answer period with Don Paff</u>.

- Q: (Tuss) Trinity river fishery releases in 1986, how much of release was made up of that emergency release for 1 1/2 weeks?
  A: If that event had not happened, it would have been below 340 af.

- Q: (Marshall) FWS states needs at 340, concerned about the flexibility that Don referred to at the beginning, and how this might affect fish?
  A: (Paff) Clarified that the values he discussed at the beginning were just to give perspective. Flexibility within limits is fairly discretionary, although limited. Stretching a 140,000 release to a 340,000 is beyond being discretionary. After the official April 12 decision, they will again look at this.

- (Marshall): Disagrees with the graph (Attach 4, pg 13), 140 is unacceptable, he is not yet sure of the appeals process...
  (Paff): Marshall will have to stand in line to kill the messenger... Philosophically he feels that they would like to meet every objective. Reality is that they have an agreement and a secretarial decision that a certain criteria for inflow means a certain outflow. His official call is 140.

- (Martin): Regarding Figure 3 (Attach 4, pg 8), "carryover storage": What would happen if the storage was driven down? Is direction from the secretary the only way that you would release this amount? Is there a process for asking the secretary to revise his decision?
  A: Once you open the door, then all the users can also ask for water. If the secretary decides to change his mind, then the flow regime could change for this year. If we started today, the decision would not be made until after the water year is over.

- (Bingham): Are you saying that we are going to be in a critically dry year?
  A: We better look for a tough year, can't plan on it getting better. The call that they make on April 12 will tell us the final situation and another letter will be sent to Fish and Wildlife Service.

- (Marshall): Are you saying that Trinity water is needed to reduce the temperature of Sacramento River water?
  A: Temperature is a critical issue -- critical temperature is 56 degrees for salmonids. Reservoirs-without-rain do not have cold water. Technical facts will not be discussed here. Flows and temperature are both critical, something has got to give.

- Masten: Concerned about being at 140 with no options. Especially concerned about taking water from our system for another system, "my people depend on the river for their whole well being and future". Concerned that this has been brought to the point that the appeal rights are virtually nil... and deeply concerned about what's going to happen and our limited ability to do something about it.

- (Fullerton): Don is just telling us the consequences that may occur.

- (Paff): We only have some wiggle room, not massive discretion. The harder we argue about numbers, the harder it gets. We should try to find ways to mitigate the flows. This would be a better expenditure of energy than trying to go through the legal side. The more he is pressed, then the less wiggle room exists.

- Q: (Masten) what are the bounds for wiggle room?
  A: No answer. If we are in survival condition for fisheries, then will we try to allocate enough to maintain a balance. What if the call on April 12 is 220? If we assume 220 are we in good shape?

- (Martin): That would only be 56% of optimum for habitat utilization.

- Q: (Tuss) From looking at all of your historical info, what is your best forecast for next fall?
  A: I can give a 50:50 call ....50% it will be wet, 50% that it will be dry.

- Q: (Martin) Interested in the relationship between fish in the Trinity and fish in the Sacramento. What does the 200,000 af storage mean if it is flowing down the Trinity? Down the Sacramento? Is it

correct that if winter chinook are listed, then you have to meet the recovery plan for cold water? If the Sacramento fish are listed then are they a priority?
A: Yes

- Q: (Martin) What's the technical basis? The problem is that the potential damage to the Trinity could be worth more than the impact on the winter run? if someone sued you over this, what would be the process?

  A: This "what if" game means "where do we want to put our resources". Look at the ripple effects that may occur, look at the ripple of what would happen. There could possibly be forecasting of biological implications on fishery agencies. Planning studies and forecasting studies are important, but may not become real. They will play what if games either way...

- Q: (Naylor) Water from Trinity to cool Sacramento River doesn't really help because it warms up enroute to the Sacramento, correct?
  A: Trinity water transferred to the Sacramento may end up warm, but this transfer conserves cold water in Shasta lake. Later, when the cool water in Shasta Lake needs to be used, it is still there. Also, power is generated from Trinity water five times during the transfer to the CVP.

- Q: (Wilkinson) How does this multiplicity of projects affect the flow regimes?
  A: Assumes unimpaired flow. State Water Resources Control Board designates requirements for delta flow. First the flows need to be kept at a high level, but not too high... in the past, water was borrowed from the Feather River to meet flow requirements on the Sacramento.

- Q: (Wilkinson) What about private hydropower developers ?
  A: The problem is that they want to deliver water in July when needs are up, yet still meet their water releases in their Federal Energy Regulatory Commission (FERC) licenses. They don't want to release water unless they get reimbursed for the energy loss in dollars . This is on the list of things to do soon.

- Q: (Hayden) Are you required to take water out of the Trinity to put into the Sacramento?
  A: No. But, the reservoirs would be refilled equally in case of a storm.

- Q: (Marshall) If you release it which way would it go? fish? power? delta?
  A: Yes, all. The operation objectives set last year were met. This is the key point. How we did it is operator techniques. Via flow restrictions, etc.

- (Naylor): Some flows are needed for dilution of discharge (example: Iron Mt mine).
  (Paff): Water from Spring Ck. (Shasta System) is used for this. I do not believe that the solution to pollution is dilution. No Trinity water is used on this EPA Superfund site.

- (Martin): Let's make a recommendation on this after lunch, after an opportunity for public comment.

Public comment on 1990 water issues.

Supervisor Howard Myrick of Trinity County provided comments, including the following:

- To put the 140,000 af for Trinity flows in perspective, 750,000 af would be diverted from Trinity Basin to the CVP.

- 1990 would be only the second year that CVP deliveries to water contractors will be significantly cut because of low supplies.

- Hard to understand why the Secretarial Issue Document ("Andrus Decision") cuts Trinity flows in dry years, but doesn't seem to affect other basins.

Council discussion and recommendations for 1990 water management.

(Martin): Klamath Council is obliged to advise the Secretary of the Interior of some critical concerns related to 1990 Trinity flows, including:

- Wisdom of diverting >70% of Trinity flow when the Klamath Basin supports fish stocks that may be classified as threatened or endangered.

- Klamath natural chinook stocks impose a constraint on harvest of several other salmon stocks, including Rogue and other Oregon stocks. The effects of Trinity water transfer thus include a transfer of economic benefits from Oregon ocean fisheries to Central Valley agriculture.

- When the Andrus Decision was made to provide flows for the 12-year flow study, it was not intended to provide the high number of years of low flows that have resulted from climatic conditions in the 1980's.

- Flexibility of the Bureau's Mid-Pacific Region in providing flows above Andrus requirements, while appreciated, is far short of providing for needs of Trinity fish in 1990.

Jim recommended the Council endorse the report of the Fish and Wildlife Service on 1990 Trinity flow needs (Attachment 5) by letter to the Interior Secretary. Discussion included:

- (Tuss): If Trinity flows were maintained at 220,000 or 340,000 af, how much more would farmers be impacted, given that some contractor deliveries may be cut by 50%?

- (Paff): The CVP normally delivers about 7 million af of water. This year, we anticipate 4.9 maf... so subtracting another 0.2 maf would be a relatively small additional impact for irrigation... but there would be other costs, principally impacts on our ability to meet hydropower contracts, and on our hydro revenues. I don't know the total cost of keeping fish flows in the Trinity.

- (Paff): If the Klamath Council wishes to recommend some action to the Interior Secretary, don't just endorse the USFWS memo, because that doesn't provide a complete picture of the tradeoffs. Second, remember that our final water supply forecast won't be available until later in April... the water situation could change somewhat.

- (Marshall): Propose we ask the Department of Interior (DOI) to drop the 140,000 af flow from the range of reasonable options...that is, re-examine the Andrus Decision...not necessarily for 1990 operations, but soon. Biologists no longer feel 140,000 is even minimally adequate.

- (Bingham): Attachment 5 indicates that FWS calls for most of the Trinity water to be released in the spring, so we don't have much time to deliberate on a position. Our statement to the Secretary should acknowledge the need to fully protect the Sacramento winter chinook run.

- (Masten): Need to remind the Secretary of his trust responsibility to tribes ...Trinity fish are economically important to Yuroks.

- (Hayden): Let's avoid getting drawn into a debate over trading off Sacramento and Trinity fishery benefits.

Other Council comments:

- Q: How important is Trinity flow for Sacramento fish stocks other than winter chinook? A: CDFG estimates Trinity shipments buy a few days of cold releases for fall chinook spawning in October.

- Q: Of the 70% of Trinity water diverted to CVP, how much is needed for Sacramento fish benefits? A: (Paff) Can't account benefits that way ...water is multipurpose.

- Don't see that Trinity flows benefit the reach from Clear Creek up to Keswick Dam, which is an important spawning area.

- Skeptical about the alleged connection between protecting the Sacramento winter run and a requirement for critically dry year flows in the Trinity... doubt that this tradeoff is really necessary.

- (Fullerton): Don't agree with Martin that we should endorse the FWS memo ...we haven't had time to study their analysis. We should inform the Secretary we need more water for fish, but I don't feel we should ask for reconsideration of the Andrus Decision.

- (Martin): How about a brief Council letter to the Secretary that we can all endorse... members who wish to take stronger positions can write separately. Minimum position I would like to see taken is: Provide for needs of Trinity fish before diverting water... leaving it up to the Secretary to get the best advice on what those needs are.

(Martin): I move the Council write to the Secretary, advising him of our concerns.

Seconded.

- (Marshall, Tuss): Support the motion, but feel we could go further and support the FWS memo.

- (Bingham): How about adding concern for the winter run? (Martin): Not part of my motion... Winter run is already a constraint on Bureau of Reclamation (BOR) water operations... don't want to dilute our Trinity concerns with issues that are taken care of by other means.

- (Bingham): How about natural stocks of falls in the Sacramento? (Martin): Again, not part of my motion... leaving it to Interior to balance these needs, once the needs of Trinity fish stocks have been met.

- (Warrens): How about noting possibility of protected status for some Trinity/Klamath fish stocks.

- (Martin): My motion asks the Secretary to use best current information to estimate Trinity flow needs for fish in 1990. I intend that a letter from Oregon Department of Fish and Wildlife will go beyond that request to ask for complete protection for Trinity stocks.

The motion passed, with Bingham abstaining. Chairman Fullerton requested Martin and Iverson to draft a Council letter, for review on 1 April. The draft letter was presented later in the meeting by Martin, and was approved with editorial changes. (Attachment 12).
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Report of the Technical Advisory Team (Baracco).

Alan noted the recent Team gathering at Del Robinson's home... thanks to Mrs Robinson for her hospitality and patience.

Alan provided a handout (Attachment 6) summarizing status of Tech Team work assignments:

Spring chinook monitoring/assessment:

- Natural populations are depressed.
- Recommend systematic information-gathering, beginning with the 1990 run... that is, enhancement of present monitoring.
- Bureau of Indian Affairs (BIA) proposal for monitoring commercial gillnet fishery for springs is adequate.

Analysis of PFMC options:

Options were developed using the KOHModel, and with Tech Team involvement. Note small disagreement with PFMC Salmon Technical Team over effectiveness of dampeners for the KMZ sport fishery. Both groups feel dampeners will be ineffective at expected catch rates, but they would be effective if fish availability were high, as in 1989.

Spawning escapement policy options/alternatives to Amendment 9.

The Team's analysis of two troll industry proposals to modify spawning escapement policy (Attachment 6, pg 2) indicates very small benefits to harvest. A more detailed analysis of these options will be provided if PFMC elects to keep them under consideration in the amendment process.

Prioritizing Team assignments (Attachment 6, pg 3).

Highest priority is reassessing gillnet vulnerability of 3-year old chinook, as a percent of vulnerability of 4's. This estimate can't be provided until after the April PFMC meeting, when inriver allocation will be known.

Council response included:

- Q: Regarding PFMC options, did you model reduced impacts in adjoining ocean cells, given the delay in the KMZ general troll season until late July or August in all three options? Can the impacts be transferred to other cells?
  A: July and August fisheries impact Klamath stocks less than do June fisheries, and we have factored this into the KOHModel. It is hard to quantify a transfer, but is safe to say that reduced KMZ impact translates into making more Klamath chinook available to outside areas.
- Q: Can we manipulate net fisheries to target on hatchery stocks...to provide more ocean harvest?
  A: The proposed shift to later fall fishing and smaller mesh nets should take relatively more 3's, thus reducing harvest rate on 4's.

- Q: Regarding #3 in the prioritized list of tasks (Attachment 6, pg 3), will you look at methods, or actually do the investigation?
  A: We will review some methods ...like fin clipping of hatchery fish. We will estimate cost, feasibility of methods.

- Q: Since Cost Per Unit Effort (CPUE) won't be analyzed until November, does that mean it can't be applied to management until 1991?
  A: Salmon Technical Team needs information on proposed new management tools by July of the preceding year, so CPUE probably wouldn't be used before 1992.

- (Martin): Agree with Team prioritization...first 3 items on p.3 are needed for harvest planning, and operationalizing our La Jolla objectives and goals.

- Q: (Hayden) Didn't Lisle Reed ask for a symposium on ocean mortality?
  A: (Tuss) I have started work on a symposium proposal, for possible submission to the Task Force for FY1991 funding.

- (Masten): Concur with Team's recommendations on spring chinook monitoring, and am concerned about the proposed delay in time of installing the Junction City weir in 1990, since this would lose data on the main part of the spring run.

- (Naylor): Problem is, we can't operate the weir at the flow levels requested by the flow study group, to gather information on sediment transport. High flows scour substrate under the weir panels, causing them to collapse. Those flow levels assume a water allocation of 340,000 af, which may not be provided.

- (Terry Mills): If the weir goes in late, information on run timing will be lost...but run size can be estimated by mark/recapture. If marking is done on only a portion of the run, this increases the probability of error in the run size estimate.

- (Marshall): Any other way to capture fish, like seining?

- (Mills): Maybe visual observation, if the water isn't too murky. We won't know if there will be a high water problem until negotiations over Trinity flow are completed.

- (Odemar): Sonar would be a possible technique, but we haven't sufficient funding to add that.

- (Tuss): Probably a non-issue in 1990 given the scarcity of water, but we shouldn't get caught in the box of the flow study conflicting directly with fish monitoring.

- (Masten): CDFG, we hope you are budgeting for increased monitoring of spring chinook as suggested by the Technical Team and requested by Klamath Council. Remember the threat of listing of these stocks.

(Naylor): Hard to promise anything...we have an $11 million shortfall this fiscal year, project $14 million next year. New positions and equipment purchases are frozen. Problem is a drop in license sales.

Listing of South Fork Trinity spring chinook and steelhead.

(Masten): On the topic of spring chinook monitoring, we are concerned about a problem in getting a formal State agreement, by MOU, to the conduct of our spring chinook gillnet test fishery. Thought the Council, including CDFG, had endorsed that fishery at our last meeting.

- (Naylor): The problem is a letter from the Sport Fishing Alliance (SFA) asking us to investigate spring chinook and steelhead stocks in the South Fork Trinity for threatened/endangered listing under State law. If the Fish and Game Commission designates these stocks as listing candidates, the Department has one year to investigate status. I'm not sure whether a request to consider listing puts a hold on harvest.

- (Odemar): Believe that a candidate species is treated as being listed until status is determined.

- (Masten): We have lots to do to get ready for our May fishery startup -- like advertising for a fish buyer. We thought all our coordination was completed through the Klamath Council process... and would like some direction from the State very soon. Wonder why the possibility of listing wasn't raised and considered earlier.

- (Naylor): We are working on the SFA letter now.

Public comment.

Sue noted that the Council will take public comment again before taking action tomorrow.

(PCFFA rep): Would like to see Option 1 modified to a lower number, this would be fair to troller.

(HFMA rep): Voiced feelings of frustration. Pleased that council is writing letter to secretary, salmon stocks must be protected for the families that they support.

(Native American): How dirty can water be for fish to still be able to live in it? Concerned about herself, and the need to address the issue of clean water! Clean water should be a priority, especially for the lower river, but the whole river is affected by raw sewage and herbicides from Simpson.

(Fullerton): Responded that the Task Force is looking into this and the Management Council is interested in this topic.

(Yurok commercial fisherman): Supports option 3 only.

(Biologist): Need better enforcement of regulations, sport harvest would have been reduced by 20,000 fish if it was better enforced. (This 20,000 is based on personal experience and guess). Suggested that DFG set up a camera on the jetty to get a record of the impact of sport harvest. Mike Morford has coauthored petition to list spring salmon, as threatened, now is the time to get ahead of this issue by commenting on USFS plans. Also concerned about coho and sturgeon, need to take a proactive position on these fish.

(Yurok fisherman): A letter read by Sue Masten, (Attachment 11).

(HFMA REP): Looking forward to hearing the actual conditions of habitat on the river. Commends Council for looking at the condition of the habitat.

(Walt Lara, KRBFTF rep): The habitat exists... so he says no to spawner escapement reduction.

1 APRIL 1990, EUREKA, CA.

Consideration of emergency reduction in spawning escapement objective.

It was noted that PFMC will consider a troll industry proposal for a one-time emergency reduction from the Amendment 9 spawning escapement rate objective, in consideration of habitat limitations. CDFG was requested by PCFFA and Assemblyman Hauser to provide a report to the Klamath Council on effects of expected flows on habitat, so Terry Mills of the Natural Stocks Assessment project is here to report on this subject.

(Mills): Regarding flows available for adult salmon migration, holding, and spawning in 1990, I expect conditions to be about like those of recent years... no major deterioration in conditions because of the current draught. Rationale:

- Trinity flows probably won't be held to 140,000 af. Politically, a much higher flow level is likely. Biggest flow needs are in spring, and there hasn't been much of a problem in getting 300 cfs fall flows requested by the flow study team. If the 400 cfs requested for fall 1990 is provided, conditions would improve. The limiting factor in the Trinity is flow to make tributaries accessible, and to stimulate fish movement. Rain is needed to get fish moving into uncontrolled tributaries like Canyon Creek and North Fork Trinity. Temperature is not so much a problem after mid-September.

- On the Klamath side, snowpack upstream of Klamath Lake is about 80% of normal, and Klamath Lake provides a buffer against low flows... so Klamath flows should be adequate. Rain will be needed in September and October to get fish moving into the Scott, Salmon, Shasta, and Bogus.

- Klamath Basin natural chinook stocks appear to be spawner-limited, even after the recent series of relatively dry years.

Council discussion:

- Q: The FWS memo (Attachment 5) seems to show that the flow requirement for spawning is modest - 400cfs. So, if flow is cut in a dry year, wouldn't the reductions come mostly from spring flows?
  A: Correct. Large flows don't contribute much to spawning habitat.

- Q: In 1989 there was a proposed reduction in spring flow, which would have stranded fry... but rains intervened. Do you agree spring flow reductions would affect early survival. A: Yes.

- Q: In 1986-88 we saw lots of Trinity spawners. What was the hatchery component?
  A: Relatively high proportion for fall and spring chinook and for coho.

- Q: Where do salmon spawn in the main Trinity?
  A: Heaviest spawning is in the uppermost 2 miles or so, then the next several miles downstream, then the remainder. Note that most streams in the Klamath River basin are underescaped; Bogus Creek may be the only consistently overcrowded spawning area. The total number of Klamath basin spawners is low, but distribution problems sometimes cause local concentrations. For example, recent years of dry falls have tended to keep fish from ascending tributaries, and many spawn in the main Trinity instead.

- Q: Did the years of big spawning escapements produce lots of outmigrants?
  A: Haven't completed our data analysis for natural stocks. Hatchery release schedules have caused us a problem in later years of the natural stocks assessment. There was formerly a separation of about two weeks in peak outmigration of hatchery and natural fish, but hatchery releases have been moved up to avoid high temperatures downstream.

- Q: Does this imply density-dependent competition of hatchery and natural fish? A: Could be.

- Q: How does size of hatchery outmigrants compare with naturals?
  A: About the same... many around 80 mm... can't use size to distinguish.

- Q: Why such big returns to Bogus Creek?
  A: Nearness of Iron Gate, with adults still around seeking to spawn after ladder closes; and gravel enhancement work in Bogus Creek in the mid 80's. (Bingham): Let it be noted that Salmon Stamp paid for that gravel enhancement.

- Q: Tell us about juveniles that overwinter... coho and steelhead.
  A: Most Trinity coho are hatchery stock, very few naturals... some are hatchery strays. We find few coho juveniles in Trinity basin streams.

Trinity Hatchery steelhead returns are at record levels... hatchery staff think the spring releases for the flow study have been good for downstream transport of hatchery steelhead releases. Natural steelhead populations are not doing so well (referring to the fall/winter run). For them, protection of tributary habitat is important.

- Q: Is there a run timing difference between Trinity Hatchery falls and natural fall chinook?
  A: No, judging by data from Willow Creek weir mark/recapture.
  (Baracco): There are, however, differences in run timing between Klamath and Trinity stocks.

- Q: You mentioned long periods of holding of chinook adults in the Trinity in September and October. If it doesn't rain, what happens to these fish?
  A: Under unusually dry conditions, they can't get into tributaries. Normally, most will eventually get in to spawn. (Bingham): Our letter to Secretary Lujan indicates we aren't confident of getting adequate flows. (Mills): In speculating about whether there will be enough flow for spawners in 1990, remember that Klamath basin is underescaped. As a general rule, we need all the spawners we can get.

- (Martin): I hear Terry saying we need sufficient Trinity flows to position fish near the tributaries, and then we need fall rains to get them up.

- Q: Were tributaries adequately stocked last year? A: No.

- Q: How do we get more spawning in tributaries?
  A: Habitat restoration work helps. For example, we estimate that egg-to-outmigrant survival in Bogus Creek falls increased from 3% before gravel restoration work to about 10% after.

- Q: But would a stream not having the large pool of spawners available to Bogus respond as well?
  A: Good point... most streams are spawner-limited.

- Q: Do you feel that propagation of local stocks, as at Horse Linto, is an effective restoration measure?
  A: Agree we need to get more spawners into tributaries, but not sure of the wisdom of many artificial propagation programs... maybe if habitat is provided, fish stocks will rebuild on their own.
  (Baracco): These projects can help speed initial seeding, if they are suited to the amount of local natural habitat.

Q: In the past few years we have had low numbers of tributary spawners, even while total spawning escapements were up. Is there any effort underway to solve this?
A: (Martin): Our harvest rate management, together with habitat restoration, is aimed at restoring natural stocks. Results may take

awhile... don't expect natural stocks to respond as fast as hatchery stocks.

- Q: What are hatchery spawner needs?
  A: 17,500 adult falls for combined mitigation needs of both hatcheries, but they can accommodate up to 24,000.

- Q: Assuming that Trinity flows will be something over 200,000 af, can the basin accommodate the 50,000 natural spawners that PFMC options provide for?
  A: Yes. With that level of Trinity releases, we would have the 300 cfs needed for spawning.

Additional public comment.

(United Anglers rep): Management of spring chinook looks promising: commercial net fishery will be timed to avoid natural stocks, and biologists will take scales to determine origin of net-caught springs... a step forward.

(Troller): Hope the Council can come up with an acceptable fall chinook allocation for 1990... looks like one or the other user group will fall short of minimum needs at either end of the ocean harvest rate range being considered by PFMC. Please note that cutting ocean harvest rate from .40 to .35 will provide about an additional 6,000 chinook for inriver harvest, but will cost the Fort Bragg fishery about a month ? of additional closures, which translates into 50-60,000 chinook at historic harvest rates... plus impacts on the Coos Bay fishery. This seems an excessive impact on ocean fisheries, so I support the .40 option. Regarding the KMZ sport options, let's stay with Option 1, which ocean harvesters agreed to in February.

Council comments:

Q: What is the multiplier to equate inriver and ocean harvests?
A: (Baracco): Klamath contribution rate for the July Fort Bragg cell is about .25. Shifting Klamath impact from river to ocean allows harvest of other stocks, but it also raises mortality of immature Klamath chinook. This is why the model shows more total Klamath impact at high ocean harvest rates.

Public comment (continued):

(Charterboat operator):

- Unhappy that some Klamath Council members supported addition of more KMZ sport harvest options, in addition to Option 1 endorsed by the KFMC at their last meeting.

- Dispute the finding of the Salmon Technical Team that a ratio fishery won't dampen KMZ sport catch - it would have in 1989.

- o Another effective dampening measure would be better law enforcement.

- o Sport angling hooking mortality can be reduced by education about ways to handle fish that are to be released. Eureka area charter operators are preparing posters to tell anglers how to release fish.

- o Support sport Option 1.

- o PFMC should be elected, not appointed... some members are ignorant of fishery dynamics, as indicated by the recreational Options 2 and 3.

- o Some improvement in communications between anglers and CDFG agents last year.

Council comments:

Q: How many illegal sport caught fish were taken during the hot KMZ fishing last summer?
A: Enforcement is better than it used to be... we know of 10-15 consistent violators of limits. Some people just don't know the regulations... United Anglers is trying to educate.

(Martin): Salmon Team's comments on the ratio fishery referred to average fishing conditions: a 23-25,000 chinook harvest in the KMZ sport fishery. I agree with them, but also agree with you that the ratio fishery would dampen under unusually high CPUE.

Q: Since charter operators are concerned about illegal sport fishing, are anglers and boat operators ready to turn violators in?
A: Many are reluctant to get involved... feel a better deterrent is an increased law enforcement presence.

(Warrens): There are not enough enforcement officers, and are not likely to be. Am surprised that the angling community is not more willing to help in law enforcement - since you are being hurt by violators - and am dismayed by the reluctance of local judiciary to prosecute these people.
A: Agree, and will discuss at next local United Anglers meeting.

(Naylor): Note the CalTip secret witness program... can be effective. Our enforcement officers are both in view and covert, and will be on the job every fishing day next season. We find it is difficult to get a conviction once the illegal catch reaches private property ashore.

(Bostwick): Our experience: a few arrests have much effect on other potential violators.

Public comment (continued):

(Troller):

- "Floor" of 35,000 natural spawners has no basis in fact... productive capacity of Klamath basin is reduced below this... evidence is record returns from escapements of 20-40,000.

- Understand many unspawned spring chinook were hauled to a Modesto tallow works from Trinity Hatchery last year... excess to egg needs... we heard a figure of 12,000 fish.
  (Odemar) These were probably inedible spawned carcasses, but we will look into.
  ****
- Recommend cutting escapement by 5-6,000 this year... below the 65,000 or so planned. This will not harm the stock, will not reduce productivity.

- Ken Henry told me it may take 40 years to test the harvest rate concept... biologists' numbers vary widely, confidence is low. We need to adjust the harvest rate experiment to take account of historic fact, which is that low escapements can produce large recruitments.

Council discussion:

(Baracco): The 35,000 floor is about half of the median estimate of optimum natural escapement by biologists familiar with the Klamath. Their estimate of the range of Basin carrying capacity is 43,000-106,000 (Hubbell and Boydstun, 1985).

(Fullerton): If we reduce escapement below the 65,000 recommended by the Tech Team, won't we be building a deficit for next year?
(Baracco): Increasing ocean harvest this year will reduce harvest of 4's next year.

(Martin): I don't buy the argument that history refutes the logic of harvest rate management and escapement rates recommended by biologists ...encourage users to get better educated on the technical basis for Klamath chinook management. Regarding the big variations in stock/recruitment, you can't estimate a proper level of seeding just by looking at ocean stock size of various cohorts, because these are affected by variation in ocean survival.

(Bostwick): Who would harvest the 5-6,000 additional fish?

(Bingham): Responding to Jim, people in the industry would like to be better educated on technical issues, so we support the symposium on Klamath chinook that was discussed earlier.

Public comment (continued):

(Troller): The Council just drafted a letter saying there won't be enough water this year... we are simply agreeing that habitat will be scarce, and spawner numbers should be reduced accordingly.

(Yurok member): Was surprised by Mr. Bosco's statements at Seattle PFMC favoring cutting chinook returns to the river... ocean users have a history of undercutting us at PFMC... hope the Klamath Council will remember inriver needs... we are the only group that has abided by the 5-year agreement.

(Oregon troller):

- Support PFMC troll Option 1, with an additional dip into spawning escapement, to be shared equally by river and ocean users.

- Favor KMZ sport Option 1. Was disappointed that KFMC members, at Seattle PFMC, supported considering other options.

(Yurok members): Support troll Option 3.

(Charterboat operator):

- Favor sport Option 1.

- Want to see more law enforcement presence in the sport fishery. More agent time on the docks noting license numbers might reduce the number of people buying two licenses.

(Wilkinson): Supports Option 1 for recreational fishing.

Oregon troll industry modification of Option 2. (Boley).

Scott Boley, Technical Advisory Team, presented support for a modification of option 2 for ocean. (Attachment 7).

Discussion on the Oregon troll industry modification of Option 2.

- (Fullerton): We can't vote on something that we don't know the effects of.

- (Martin): On Attach 7, pg 6... This looks like it would eliminate 1 closure (June), 23K for KMZ, same from council (24,700), believes that 23K would be appropriate, based on equivalency of Ft. Bragg and Coos Bay catch. The cap on 35K is approximate, probably lower. Four 8-day closures in June/July. Would all these differences mean more harvest of Klamath fish?
  (Boley): Not unless you model less effort into this. Take savings below .40 and add it to in-river.

- (Bingham): The difference between .35 and .40 should be about 6,000 fish.

- Q: (Martin) Would this new model cause the ocean harvest rate to change from .40 to .375?
  A: (Boley) I don't know, it should be lower than .40.

- (Martin): How do we find this out in the time we have available?

- (Barraco) The Salmon Technical Team (STT) discusses all modeling parameters. The proposal for KMZ seasons, to replace a quota, is a big source of uncertainty in predicting KMZ troll harvest. Deviations from the model in the KMZ troll are more important in terms of impact than in Southern California or Northern Oregon.

- (Marshall): Isn't there another way of getting at this same thing?
- (Martin): What would happen if the council directed the STT to shape the option and present it to the PFMC?

- (Boley): No, because last year we tried to add the human component to computer models, and this proposal is not more liberal for "k-impacts". It is somewhere below the .40 harvest rate, his personal opinion is not out of line... don't settle on a harvest rate then try to work out the numbers based on that.

- (Marshall): Doesn't see how we can take an action on this, but it could be considered during this next week.

- (Boley): Hard copy of this modification has been provided (Attach 7). The modification will be lower than .40, hard to say how much.

- (Fullerton): Not ready to do this today. Jim Martin, Scott Boley and the Oregon trollers are being creative and stretching the absolute most out of what they've got to work with. Let's use the PFMC charts (Attachment 3) as if they are reality, make a judgement on these, and then send it to PFMC.

- (Bingham): If we come to an agreement, then we should stick together and present it to the PFMC.

- (Fullerton): We should pick one option and re-shape it rather than make up another option.

- (Marshall): Maybe we should divide the Sport and Troll option to try to reach agreement faster.

- (Bingham): Try a hard edged proposal... 4 closures in Coos Bay & Ft. Bragg (same as that proposed by Scott), divide the 6,000 adult Fall Chinook 50:50 between ocean and inriver.

- (Fullerton): Are we going to make an emergency action to change Amendment 9? We need to make a decision.

- (Bingham): Don't like us being pitted against each other, especially when the numbers are not that reliable. If we cant trust Scott's approach, then yes, we need to request emergency amendment.

- (Martin): Last year, Oregon's position varied from the escapement goal, at the first Council meeting we decided not to vary from Amendment 9. It's too late now, would be difficult to justify doing. What will the Secretary of the Interior feel like if he hears we adjusted escapement, especially after we sent him a letter requesting his support for adequate Trinity flows?

(Bingham): Made a motion to make an emergency adjustment to amendment 9.

No second, therefore motion failed.
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- Sue Masten expressed her disappointed with the PFMC and KFMC process, and provided her support for Option 3.

Bob Hayden made a motion for Option 1 to be recommended for Recreational fisheries.

Motion passed by consensus on Option 1 for Recreational Fisheries.
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- Mel Odemar, addresses the concern that council not have enough information on options from cdfg.

- Sue Masten: Yuroks needed to prepare plan---therefore other agencies should have to do the same. Changes in management plans should be brought before the Council. Appreciates the state's effort to bring their plan before the Council.

- Jim Martin thinks that Scott, Keith and others have demonstrated that .4 is at or below needs. Can't live with less than this, zeroing out is unreasonable. Option 2 is the only one that comes close to compromise.

(Martin): Motion that Option 2 be supported by KFMC.

Seconded by Warrens.

Discussion:

- (Marshall): Does not feel comfortable with Option 1 or 2, feels that it limits our ability to negotiate. 3 years ago an agreement was made, now it feels like KFMC didn't honor this agreement during the first year, agreements should stand. On principle alone he will stay with option 3, realizes that this causes difficulty but feels Indian people cannot accept abundance going to one user while another user

loses out. Feels Indians have paid the price, but have not gained benefit.

- (Bingham): Regarding that agreement, the troll industry recognized and supported indian fishing rights, PFMC did their best, not fair to bash PFMC for having predicted wrongly. Participants did not act in bad faith, this is what a long-term planning process is all about, need to fix the system. Cannot agree with Option 2 -- need .4 or .5.

- (Martin, responding to Marshall): It is absolutely ridiculous to say we didn't stick with deal, more of responding to new information. Reaffirmed the objective of the KFMC: make recommendation to PFMC.

- (Warrens): Emphasized every comment that Jim made, affirmed that Friday he will vote on Option 2. He feels this is fair because it splits things down the middle, based on needing to make a decision this week.

- (Masten): The agreement is the only thing that everyone has signed in consensus. She has a hard time with the ocean having the ability to access other stocks, more than just Klamath stocks. This is the key because ocean users can still have ability to catch other stocks, but inriver users do not have this opportunity. It is not her intent to close the ocean, is her intent to ensure that her people have their share.

- (Fullerton): Last year we were the "bouncing ball", Bosco's bill gave people a chance to make a recommendation, therefore we will defeat the objective of the bill if we don't do this, are we going to be meaningful?

- (Warrens): Not intending to be argumentative with Sue but the ocean perspective needs to be represented, Sue's point is beyond being reasonable, .375 is the very bottom line for the troll industry.

- (Fullerton): The motion before us is for .375.

- (Warrens): Holds stock in agreement, will only support .375, no intention of hedging.

(Bingham): Called for 15-minute break. (Break time).

- (Bingham): Regarding the proposal made by the trollers to purchase part of the Indian allocation: clarified that the rights-to-fish are not bought but the harvest allocation could be bought.

- (Masten): Sue clarifies that Native American rights are to fish.

- (Wilkinson): Feels that the Oregon modification proposal could be modeled out very quickly... could provide opportunity for inriver harvest adjustment. Wants to see a quick model run on this.

- (Martin): Intent of this motion was to see .375 for ocean, then send balance point to PFMC. Hard to see how model run will help make decision.

- (Naylor): As the motion now stands, CDFG feels an option that is somewhere near last years would be best.

- (Tuss): If inriver can shape their season, how can Lyle and Sue maximize their harvest?

- (Martin): The intent would be to take impacts of .375 with escapement and work with in those impacts. Explore the possibility of moving weir, changing weir, changing season. Inriver fishery can't target hatchery fish, but there may be creative options out there.

- (Bostwick): 2600 fish would be closure. This low number would not be acceptable.

- (Masten): Model showed different options, concerned w/ finding more paper fish, anything lower would not work.

- (Bostwick): If lower river indians have split seasons, it would increase catchability. 2800-3200 taken last few years, there is a built in safety to reduce the bag limit to keep people on the water.

- (Warrens): PFMC stepped outside the needs of this council. [Frank: help us fill in your comments.]

- (Wilkinson): Time to run model would not take long...

- (Marshall): Does not support motion for option 2.

- (Fullerton): If model ran, would this influence vote?

- (Wilkinson): Let's break for lunch without leaving motion, and have the tech-team run the model and report back to us after lunch.

(Martin): Called for a vote on this,

Yes, the model will be run at lunch.

****

LUNCH BREAK.

Council action on ocean salmon options (continued).

Oregon troll industry proposal (Boley) (continued).

Reporting back on the results of running the assumptions of this proposal through the KOHModel, Scott provided Attachment 8. The top block of the model run printout shows the assumed reductions in effort in outside areas resulting from a shift of the KMZ general troll fishery into August. Exploitation rates are shown as proportions of base period (1986-89) historic exploitation rates. Basis of the assumptions about effort shift is expected prices, safety regulations, and other factors - information from Boley and Maahs.

The model predicts an ocean harvest rate for the Oregon proposal of .368, and inriver harvest of about 32,000.

(Baracco): Tech Team has not reviewed this proposal. Concerns I would have include assumptions about effort level being based on the 1980-89 period only, and assumption that the KMZ troll fishery could be managed with no quota, just seasons.

Discussion of the Oregon proposal:

- Q: Why should we accept an assumption of effort reduction - what evidence?
  A: (Boley) Outlook for 1990 fishing is low abundance and low ex-vessel price... Maahs data shows correlation between these variables and effort. We also expect that expensive new vessel safety regulations will keep some people from fishing. Agree with Baracco that we need a longer-term database on effort than the 1980-89 period we have used.

Further discussion of recommendations to PFMC on ocean management.

- (Warrens): I will be disappointed if we can't agree on an ocean troll recommendation. Another failure would tend to cause PFMC to stop listening to us... gives the appearance that our positions are dictated by our constituents, and we are not free to negotiate. Let's give clear direction to PFMC or get out of the annual decisionmaking process.

- (Bingham): Can understand your views, Frank, but even if we can't reach consensus we are progressing in long-term planning, which may eventually get us past some of our present limitations.

- (Fullerton): Our Council was set up to work with differences in user group needs, and similar constraints. If we can't allocate in low abundance years, we are not performing.

- (Tuss): One disappointment has been three years of arguing over the 5-year agreement. Instead of declaring it void, as some of us have

done, we should have honored it while considering new information, such as high outside contribution rates.

- (Fullerton): Don't feel the 5-year agreement is legally binding as a Federal regulation, although it should be morally binding on signers. We didn't go through the process of Federal Register notice, comment period, and other steps.
  (Marshall): Disagree... feel it is legally binding.

- (Martin): I agree with Craig that we need to honor the spirit of the agreement, that is, recognition of the legitimacy of minimum needs of each user group, while reviewing and updating the numerical allocation. The .35/.525 allocation is obsolete in light of information obtained since 1987 on the unreasonable constraints it places on the ocean troll fishery... and I will so testify in court if anyone should try to legally enforce the letter of the agreement.
  (Marshall): Didn't say we would go to court, just that my understanding of the legal stature of the agreement differs from yours.

- (Wilkinson): I remind you of a statement I provided at an earlier meeting to the effect that the new estimates of Klamath contribution rates could mean the end of the KMZ troll fishery and a severe impact on outside fisheries.

- (Tuss): The spread of opinion as to what constitutes adherence to the spirit of the 5-year agreement has hurt our effectiveness... detracted from giving attention to stocks other than fall chinook, and other things we should be doing in planning harvests.

- (Fullerton): Agree we may wish we had thought more about other stocks if any are proposed for listing.

- (Masten): As I have stated before, we always assumed that Klamath contribution rates were high in outside areas, so this information was factored into our negotiations over allocation... surprised that others claim to be unaware of the data.

- (Martin): I would be surprised if the record of Tech Team reports from 1987 and earlier show any evidence of high outside impacts... if you had some other information, Sue, wish you had shared it with us.
  (Wilkinson): Agree with Martin that evidence on outside impacts was not available until about 1989.

- (Masten, Bostwick): We didn't have extensive data, just a general impression from Fish and Wildlife Service that many Klamath chinook were being taken in outside fisheries.

- (Fullerton): Let's get back to the agenda item of trying to agree on a recommendation to PFMC.

(Tuss): Motion to instruct the Tech Team to modify troll Option 3 with the effort shift assumptions just made for the "Oregon" option, to see whether it can be made acceptable to trollers.

Seconded.

Motion failed with opposition from Bingham, Martin
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- (Martin): To save frustration, I recommend a straw poll to see if the Council is ready to leave this agenda item.

- (Hayden): The range of differences between the troll options is probably smaller than the error factor in modelling... so we are arguing over fantasy differences.

(Wilkinson): Motion to adopt the Oregon proposal (Attachment 7).

(Warrens): Seconded.

Discussion:

- (Warrens): I seconded on the assumption the Salmon Technical Team would analyze in same manner as other options. If effort assumptions don't stand up, this option would be dropped... or if their model run produces a harvest rate estimate >.375, I couldn't support.

- (Fullerton): How about setting a harvest rate objective of .368 as produced by preliminary model run for the Oregon option, then designing a proposal to achieve that rate?
  (Bingham): I can't buy that... purpose of the Oregon option was to get down to four 8-day closures in outside areas.

- (Martin): Acceptability of the Oregon proposal depends on the STT accepting assumptions about reduced effort. Without the effort reduction, this proposal will model out to >.40 ocean harvest rate. Keith, what is the intent of your motion?

- (Wilkinson): My motion includes the season shaping as shown in the Oregon proposal... not just harvest rate.

- (Baracco): Don't think the STT can quantify impacts of price or safety regulations on effort.

- (Fullerton): Seems like the Oregon proposal deals with the means - season shaping - rather than the end of harvest rate.
  (Hayden): Agree, and I can't support the motion without a harvest rate objective.

- (Martin): Hayden is close to being right in saying we are arguing over insignificant differences. How about recommending to PFMC a range of

.35 to .40, admitting we can't come closer than that to agreement. Regarding the Oregon proposal assumptions, I don't think STT will buy.

Wilkinson motion fails, opposed by Naylor, Masten, Marshall, Hayden, Bostwick.

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Harvest management plan for KMZ ocean and Klamath River sport fisheries (Odemar).

Mel provided a draft CDFG plan for managing inriver angler harvest (Attachment 9) and a draft CDFG ocean sport harvest regulation (Attachment 10). Note the estimated spring chinook harvest of about 1300 fish upstream of Junction City, about half that below Junction City in the Trinity River, and small harvests elsewhere.

Discussion:

- (Fullerton): Give comments on proposed 1990 angling regulations by Friday... we don't have time to review and act at our next meeting, as regulations will be in place.

- (Tuss): What impact would the petition for listing of Trinity spring chinook and steelhead have on sport fisheries?
  (Naylor): Not sure whether proponents will seek State or Federal listing... the State option would allow harvest of species in candidate status.
  (Odemar): A difference between sport and commercial river fisheries is that the latter calls for the Department to sign an MOU, which may put us in a legal bind if we have candidate species... don't have a legal opinion on this yet.

- (Fullerton): Note that ocean fisheries will take Klamath springs, too.

- (Masten): Still unhappy that we went through a lot of work to get a spring chinook harvest plan before this Council, only to have this problem raised later. Why, CDFG, did you not deal with listing earlier, since you knew it was a possibility?
  (Naylor): We knew it might happen, but had no specifics so don't know what we could have done different.
  (Fullerton): Agree... there are many rumors of potential listing efforts... can't let this stop us from acting.

- (Del Robinson): Hope to issue, by 15 April, a request for proposal for bidders to buy 2500 springs... so we would like to hear from the State soon.

Assignments to Technical Advisory Team.

(Tuss): CDFG, please provide results of 1988-89 spawning ground surveys below Trinity Hatchery to the Tech Team.

Discussion of next meeting

(Fullerton): Any problems with 17-18 May dates for next meeting in La Jolla? None identified. After we get a long-range plan and policy adopted, I would like us to return to our harvest sharing agreement, and complete the task of enacting it with formal hearings and other required steps.

Back to Council discussion of ocean salmon management options:

(Warrens): Motion to recommend an ocean harvest rate of .375.

Seconded.

- (Martin): Offered an amendment the motion. [Jim: please fill us in on your comments.]
- (Barraco): Reminds council that model run ... [Allan: please fill us in on your comments.]
- (Warrens): Seconded the amendment.
- (Marshall): Called for 15 minute caucus.

After reconvening, the amendment failed and the motion failed.

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Meeting adjourned at 4:30 pm.

ATTACHMENT 1

KLAMATH FISHERY MANAGEMENT COUNCIL

Attendance Roster, March 31 - April 2, 1990 meeting in Arcata/Eureka, Ca.

Management Council Members

Nat Bingham	California Commercial Salmon Fishing Industry
Virginia Bostwick	Klamath In-River Sport Fishery
E. C. Fullerton(Chair)	National Marine Fisheries Service
C.L. Marshall	Hoopa Valley Business Council
James Martin	Oregon Department of Fish & Wildlife
Susan Masten	Non-Hoopa Indians Residing in Klamath Area
A.E. Naylor	California Department of Fish & Game
Craig Tuss for J. Lisle Reed	U.S. Department of the Interior
Frank Warrens	Pacific Fishery Management Council
Keith Wilkinson	Oregon Commercial Salmon Fishing Industry

Others Attending

Dave Bitts	HFMA
Yvonne A. Bones	Self
Lavina Bowers	Self
W. L. Duncan	Shelter Cove
E. J. Finney	Self
Robert Franklin	Hoopa Fisheries Dept.
Lloyd Gillham III	BIA
Rich Haberman	Indian Fisherman
Jim Johnson	Oregon Salmon Com.
Sam L. Jones, Jr.	Yurok Transition Team
Onna Joseph	Yurok Fishing
Fred Jurick	Sea Grant
Bill Leavitt	PCFFA
John Loyan, Jr	Yurok
Harvey Marks	Self
Terry Mills	CDFG
Mike Morford	United Anglers of California
Howard Myrick	Trinity County
David O'Neill	Bosco Tribe
Mel Odemar	CDFG
Don Paff	Bureau of Reclamation
Dennis Pecaut	Ocean Recreation Fisherman
Jim Reiff	PCFFA/Fort Bragg
Kenneth Roberts	Self
Del Robinson	Bureau of Indian Affairs
Mollie Ruud	Pequa
Johnne Scott	Indian Fisherperson
Wally Scott	Indian Fisherman

Ed Solbos	USBR
Jim Waldvogel	U.C. Sea Grant
Jim Walters	Ocean Recreation Fisherman
Carol Williams	Native American
James Wroble	Karuk Tribe
Paula Yoon	Humbolt Commercial Fishermen's Wives

ATTACHMENT 2

KLAMATH FISHERY MANAGEMENT COUNCIL

DRAFT MEETING AGENDA

March 31, 1990 -- North Coast Inn, Arcata, CA.

9:00 a.m. Call to order. Correction and approval of agenda, and of minutes of the Council meeting of 1-2 March 1990, and the inriver harvester's meeting of 15 February 1990.

9:20 Report on status of the PFMC process for management of 1990 salmon fisheries (Warrens).

9:40 Discussion of Council objectives for providing harvest allocation/management recommendations to PFMC (Fullerton).

10:00 Break

10:15 Reconvene. Report on projected water situation and Central Valley Project operation, 1990 (Don Paff, Bureau of Reclamation).

11:00 Council discussion and recommendations for 1990 water management.

12:00 Lunch

1:15 Reconvene. Report of the Technical Advisory Team (Baracco).

- o Analysis of options promulgated by PFMC for 1990 management of ocean salmon fisheries.
- o Report on gillnet selectivity.
- o Report on options to Amendment 9 spawning escapement policy.
- o Team recommendations on priorities for completing assignments from the Council.
- o Other.

2:30 Break

2:45 Council discussion of Tech Team report; action on prioritizing Team assignments.

3:30 Public comment (priority given to comments on 1990 ocean salmon fisheries management).

4:30 Adjourn.

April 1, 1990 -- Red Lion Inn, Eureka, CA.

8:00 a.m.	Convene, Red Lion Inn, Eureka. Council discussion and action on selecting an ocean salmon fishery management option to propose to PFMC.
9:30	Break
9:45	Reconvene. New business.
10:30	Assignments to Technical Advisory Team.
10:45	Discussion of next meeting.
11:00	Adjourn.

ATTACHMENT 3

PACIFIC FISHERY MANAGEMENT COUNCIL

PROPOSED COMMERCIAL AND RECREATIONAL OCEAN SALMON FISHERY MANAGEMENT OPTIONS FOR 1990

Schedule of Public Hearings

March 27 Tuesday 7 p.m.	Thunderbird Motor Inn 1313 North Bayshore Drive Coos Bay, Oregon
March 27 Tuesday 7 p.m.	Washington Department of Fisheries Office General Administration Building Olympia, Washington
March 28 Wednesday 7 p.m.	Astoria Middle School 1100 Klaskannine Avenue Astoria, Oregon
March 28 Wednesday 7 p.m.	Holiday Inn - Downtown 300 J Street Sacramento, California
April 2 Monday 7 p.m.	Eureka Inn Seventh and F Streets Eureka, California

Written comments sent to the Council office, Metro Center, Suite 420, 2000 SW. First Avenue, Portland, OR 97201 must be received by March 29, 1990.

PROPOSED MANAGEMENT OPTIONS FOR 1990

On Friday, March 9, the Council adopted three coastwide management options for commercial and recreational ocean salmon fisheries off the coasts of Washington, Oregon and California. Complete descriptions of the options are provided in Tables 1 through 6. Estimates of the economic impacts of the various options is provided in Tables 7 and 8. The Salmon Technical Team (STT) report on the options will be available at the April Council meeting.

The Council is guided in developing ocean salmon management measures by its salmon framework plan. This plan consists of fixed and flexible management principles and measures to regulate the commercial, recreational, and treaty troll Indian fisheries in the exclusive economic zone off the coasts of Washington, Oregon, and California. The flexible measures are established annually to ensure that regulations are appropriate for the particular stock abundance in the current year. The management specifications which the Council may modify include:

- Allowable ocean harvest levels
- Harvest allocations (quotas and guidelines)
- Management boundaries and zones
- Season duration
- Minimum size limits
- Species restrictions
- Gear restrictions
- Daily bag limits

The Council's management objectives, escapement goals, and many other management specifications or procedures comprise the fixed elements of the plan which cannot be modified each year. Changing the fixed elements of the FMP requires a plan amendment which is a long-term process requiring public hearings of its own. The Council did not identify any need for 1990 at its March meeting which would require an emergency amendment to the plan.

This management option synopsis outlines proposed ocean salmon management regulations appropriate for the current estimates for allowable ocean harvests in 1990 and the goals and objectives of the Council's salmon plan. Since final allowable harvests, as determined by the Council at its April meeting, may be somewhat above or below the present projections, the options provide a range of possible harvests and season structures based on different levels of allowable harvests. The final allowable ocean harvest will depend on many factors, including needed spawning escapements, allocations to inside fisheries, season structure, and final action by the Pacific Salmon Commission.

The Council solicits public comments on its proposed management measures and alternatives. Comments will be reviewed by the Council prior to adoption of final regulatory recommendations at the April meeting.

Overall Harvest Range

The Council's options include a range of overall nontreaty quotas north of Cape Falcon of 65,000 to 95,000 chinook and 300,000 to 400,000 coho. This compares to 1989 quotas of 95,000 chinook and 300,000 coho. The three treaty troll options cover a range of overall quotas of 30,500 to 41,600 chinook and 70,000 to 120,000 coho. These compare with 1989 quotas of 32,000 chinook and 77,000

coho. Stocks meriting special consideration north of Cape Falcon in 1990 include Queets River natural coho, Columbia River lower river hatchery fall chinook and Columbia River upper river spring and summer chinook.

South of Cape Falcon, the options cover a range of ocean harvest rates on age-4 Klamath River fall chinook of 0.35 to 0.40. The 1989 season was based on a preseason rate of 0.375. Oregon production index area coho and Oregon coastal natural coho are at much reduced abundances from 1989. The overall coho catch quotas for the options south of Cape Falcon range from about 374,000 to 406,000. This compares to 759,000 in 1989.

The following table summarizes the various quotas.

HARVEST QUOTAS FOR 1990 OCEAN SALMON MANAGEMENT OPTIONS a/

	Option 1		Option 2		Option 3		1989	
Fishery	Chinook	Coho	Chinook	Coho	Chinook	Coho	Chinook	Coho
North of Cape Falcon								
Treaty troll	30,500	70,000	35,000	90,000	41,600	120,000	32,000	77,000
Nontreaty troll	47,500	135,000	32,500	75,000	32,500	75,000	47,500	75,000
Recreational	47,500	260,700	32,500	225,000	32,500	225,000	47,500	225,000
South of Cape Falcon								
Troll	52,200 b/	141,000	39,700 b/	160,000	57,200 b/	172,000	52,500 b/	474,000
Recreational	none	233,000	none	235,000	none	234,000	80,000 c/	285,000

a/ All nontreaty quotas have been reduced by expected hooking mortality impacts (where applicable) based on the season structure in the Options.
b/ Total of all quotas within the Klamath Management Zone (KMZ) through October 31.
c/ This was a guideline rather than a quota.

Commercial Fisheries

North of Cape Falcon

The Council's options north of Cape Falcon provide a range of overall nontreaty troll quotas of 32,500 to 47,500 chinook and 75,000 to 135,000 coho. Proposed season structures include the familiar May-June chinook fishery and a mid-August opening for the all-salmon season in all areas north of Cape Falcon except for the conservation zone at the mouth of the Columbia River. Option 3 contains a fishery similar to last year's between Leadbetter Point and Cape Falcon with a 50 coho per day landing limit but no landing limit for chinook. No changes in the use of barbless hooks or minimum size limits are proposed in any of the options.

Options 2 and 3 contain some new proposals which differ from previous seasons, primarily in the way that the all-salmon seasons are structured. These proposals are aimed at more closely achieving the allowable quotas and avoiding the extremely short (2 or 3 day) all-salmon seasons of recent years. One proposal uses a repeating cycle of two days open and three days closed and open-period (two days) landing limits of 10 chinook and 100 coho to control and distribute coho harvest. Another proposal uses a cycle of four days open and three days closed and open-period (four days) landing limits of 20 chinook and 200 coho. In addition, there is a proposal for a late season limited participation fishery (10 boats determined by drawing) in the area north of Leadbetter Point.

South of Cape Falcon

No changes are proposed in the use of barbless hooks or in the standard minimum size limits used in previous years south of Cape Falcon. Due to concerns for Sacramento River winter-run chinook, the Council rescinded the April 15 opening of the troll season off California.

All of the options adopted by the Council use Humbug Mountain to Sisters Rocks as the new northern buffer zone of the Klamath Management Zone (KMZ). This move should address significant safety concerns for fishermen working out of Port Orford, Oregon.

The total troll coho impact quota south of Cape Falcon for the 1990 options range from 239,000 to 246,000. Allowable catch will be substantially reduced from the impact quota by hooking mortality (67,000 to 90,000). A new proposal this year calls for limiting troll gear to no more than four spreads per wire during the June all-except-coho seasons north of Humbug Mountain. This restriction may help reduce coho hooking mortality.

Cape Falcon to Humbug Mountain

Between Cape Falcon and Humbug Mountain proposed season structure is very similar to 1989. The all-salmon season opens in late June south of Cascade Head and near mid-July in the northern area. Ratio landing requirements in the all-salmon season are tighter this year, reflecting the decrease in coho abundance. North of Cascade Head the single daily landing limit is proposed to be 50 coho and one chinook for each coho over 50. South of Cascade Head one chinook must be landed for every coho landed. These restrictions are the same in all three options. Eight-day block closures are generally used between Cape Arago and Humbug Mountain to control impacts on Klamath River fall chinook instead of the two-week closures used in 1989. Option 3 calls for an eight-day closure from Cape Falcon to Humbug Mountain and another uses longer closures south of Cape Arago to further reduce impacts on Klamath River fall chinook.

KMZ

The 1990 options provide for two or three open periods for the entire KMZ without the chinook landing restrictions that were used in 1989. Open periods in Option 1 and 2 include one in late July and two in August. Option 3 deletes the July opening. May and September fisheries similar to 1989 are scheduled off the mouth of the Rogue River as well as a September through October fishery between Trinidad Head and Punta Gorda. The chinook quotas for the KMZ prior to September range from about 17,200 to 34,700, compared to 30,000 in 1989 when the estimate for Klamath River fall chinook abundance was much greater.

South of the KMZ

South of Point Arena the 1990 management proposals are the same as the 1989 season. Between Horse Mountain and Point Arena block closures in May, June and July are again proposed to limit impacts on Klamath River fall chinook. The closures proposed for this year are generally no more than eight days each, rather than the two-week closures used in 1989. Options 1 and 2 provide four and six separate eight-day closures, respectively. Option 3 has four, eight-day closures plus the month of July. As in 1989, a coho quota reserve is proposed to allow continuation of the all-salmon season after the overall south of Cape Falcon coho quota is reached.

Recreational Fisheries

North of Cape Falcon

North of Cape Falcon the recreational proposals include seasons similar to 1989 with an early two-day per week chinook season in May and early June and the five-day per week all-salmon season beginning either near mid or late June, depending on the level of allowable harvest. Option 2 option substitutes an early two-day per week all-salmon season in place of the early chinook fishery. This season does not extend south of North Head and is limited to within 6 miles of shore north of Leadbetter Point and within 3 miles of shore from Leadbetter Point to North Head to reduce harvest of coho.

Recreational overall harvest quotas north of Cape Falcon range from 32,500 to 47,500 chinook and from 225,000 to 260,700 coho. This compares to 47,500 chinook and 225,000 coho in 1989. The between the areas north and south of Leadbetter Point.

South of Cape Falcon

Off Oregon, from Cape Falcon to Humbug Mountain, the options are similar to the 1989 season except for some possible closures in early August to reduce the harvest rate on coho and help achieve the season duration goal. The third option actually schedules a one-week closure near the end of June in addition to a possible one-week closure in early August if necessary to keep the season open through Labor Day. The total sport coho harvest quota ranges from 233,000 to 235,000 coho. This compares with 285,000 in 1989.

Within the KMZ, a May 1 opening is proposed in all options, but ending dates vary from September 9 to September 30. Within these options different methods have been proposed to reduce impacts on Klamath River fall chinook below the 1989 level. Option 3 proposes a September 30 closing date with a one-week closure scheduled in late July. Option 1 proposes a daily bag limit in which only one of the two fish may be a chinook for the period July 1 through August 15 (two fish per day at all other times). Option 2 proposes Tuesday and Wednesday closures in July and early August. All options contain the limit of no more than six fish in seven consecutive days as in 1989.

South of the KMZ to the US.-Mexico border the seasons are proposed to be the same as in previous years. The only change is the conservation zone closure near the mouth of San Francisco Bay in March and April of 1990 and between November 1, 1990 and April 30, 1991 to protect Sacramento River winter chinook.

Table 1. Nontreaty Troll Option 1 proposed for 1990 ocean salmon fisheries. [Shaded areas are closed].

A. SEASONS

APR	MAY	JUNE	JULY	AUGUST	SEP/OCT

U.S.-CANADA BORDER

	5/1 thru earlier of 6/15 or chinook quota of 29,600. All except coho. Maximum of 4 spreads per vire in June. See D.1.		8/18 thru earliest of 10/1 or 17,900 chinook or 135,000 coho quota. All salmon. No landing restrictions except D.1.	
	Conservation Zone 1 (C.3), Columbia River mouth, is closed.		Conservation Zone 1 is closed	

CAPE FALCON

	5/1-7/15. All except coho. Maximum of 4 spreads per vire during June.		7/16-8/31. All salmon to coho quota (E.2), then all except coho. Single daily landing limit/vessel of 50 coho plus 1 chinook for each coho over 50. 1:1 landing ratio for all coho when 30% of coho impact is reached (D.2).	9/1-10/31. All except coho.

CASCADE HEAD

	5/1-6/27. All except coho. Maximum of 4 spreads per vire during June.	6/28-8/31. All salmon to coho quota or ceiling (E.2), then all except coho. At least 1 chinook must be landed for each coho landed (D.3).		

6/20-27	7/4-11	7/18-25	8/1-8	8/15-22
CAPE ARAGO				CAPE ARAGO

HUMBUG MOUNTAIN

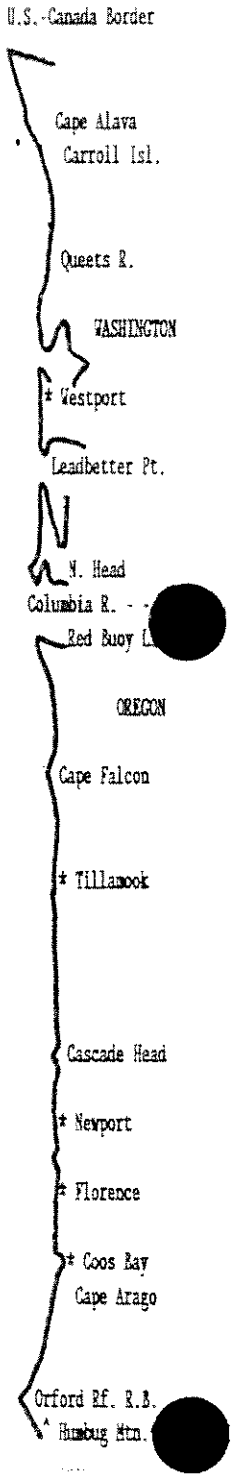

Table 1. Nontreaty Troll Option 1 proposed for 1990 ... (cont.). [Shaded areas are closed].

A. SEASONS (cont.)

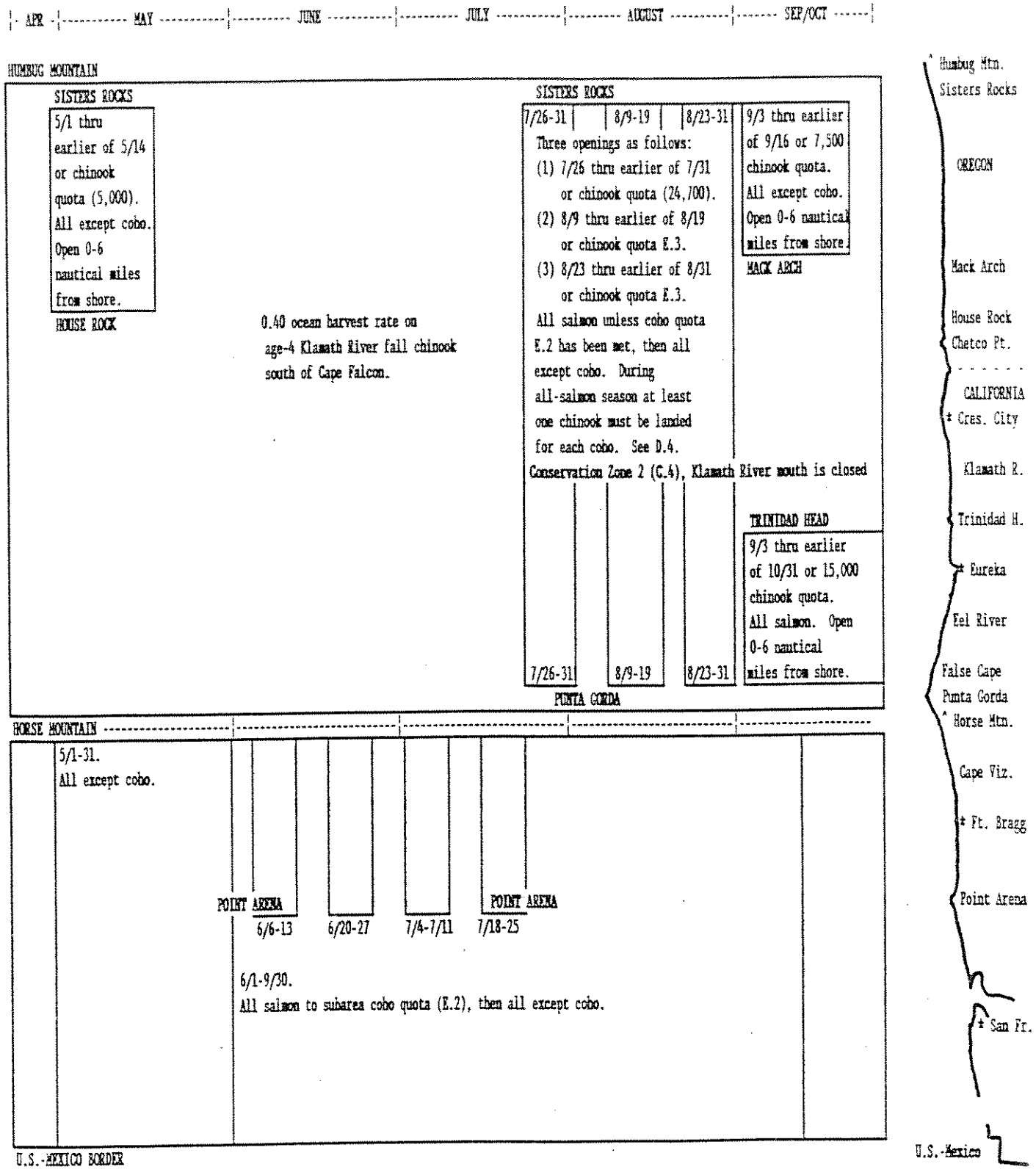

Table 1. Nontreaty Troll Option 1 proposed for 1990 ocean salmon fisheries (cont.).

B. MINIMUM SIZE LIMITS (inches)

	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	28.0	21.5	16.0	12.0	none
Cape Falcon to Humbug Mountain	26.0	19.5	16.0	12.0	none
South of Humbug Mountain	26.0	19.5	22.0	16.5	none

Chinook not less than 26 inches (19.5 inches head-off) taken in open seasons south of Cape Falcon may be landed north of Cape Falcon only when the season is closed north of Cape Falcon.

C. GENERAL REQUIREMENTS, RESTRICTIONS AND EXCEPTIONS

1. Single point, single shank barbless hooks are required.

2. Off California, no more than six lines per boat are allowed.

3. Conservation Zone 1, which is the ocean area surrounding the Columbia River mouth bounded by a line extending for 6 nautical miles due west from North Head along 46°18'00" N. latitude to 124°13'18" W. longitude, then southerly along a line of 167° True to 46°11'06" N. latitude and 124°11'00" W. longitude (Columbia River Buoy), then northeast along Red Buoy Line to the tip of the south jetty, is closed.

4. Conservation Zone 2, which is the ocean area surrounding the Klamath River mouth bounded on the north by 41°38'48" N. latitude (approximately 6 nautical miles north of the Klamath river mouth), on the west by 124°23'00" W. longitude (approximately 12 nautical miles off shore), and on the south by 41°26'48" N. latitude (approximately 6 nautical miles south of the Klamath River mouth), is closed.

5. Short-term closures. During all closures of three days or less it is unlawful for a vessel, which has been issued an ocean salmon permit by any State to (1) have troll gear in the water in any area closed to salmon fishing; and/or (2) possess salmon in a closed area, except in port, more than 12 hours after the area is closed and all such salmon in possession must be landed within 24 hours of the closure.

6. Consistent with Council management objectives, the State of Oregon may establish some additional late season, all-except-coho fisheries in state waters off the mouths of the Elk, Chetco, and Sixes rivers and off Tillamook Bay.

7. All waters south of the Oregon-California border shall open in an all-salmon-except-coho season April 15, 1991 and in subsequent years unless the Council recommends that the Secretary modify or rescind the April 15 opening date and areas for any of the following reasons: (1) Sacramento or Klamath River fall chinook ocean abundance estimates are projected to be below that necessary to meet spawning escapement goals or rate and at the same time achieve ocean and inriver harvest needs, or (2) other salmon stocks may be adversely impacted by the April 15 opening.

D. POSSESSION, LANDING AND SPECIAL RESTRICTIONS BY MANAGEMENT AREA

If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgement of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board, and the estimated time of arrival.

1. U.S.-Canada border to Cape Falcon. Vessels possessing salmon taken in this management area and delivering to a port outside of the area must notify the U.S. Coast Guard and receive acknowledgement of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board, and the estimated time of arrival.

2. Cape Falcon to Cascade Head during all-salmon season. There is no limit on the number of chinook that may be landed. A single daily landing limit per vessel of 50 coho is permitted without also landing chinook. To land more than 50 coho, at least 1 chinook must be landed for each coho landed in excess of 50. The landing ratio may be adjusted inseason to assure harvest of the quota. When the estimated impact (combined catch and hooking mortality) in this area reaches 30 percent of the overall coho impact quota south of Cape Falcon, coho may only be landed in a one to one ratio with chinook until the overall coho quota has been met. Mixed loads of chinook and coho or coho-only loads must be delivered within this management area. All chinook in possession must be delivered with the coho. There are no restrictions on the place of delivery of chinook-only loads. Chinook and coho salmon possessed or landed in this management area may not be returned or transferred to any vessels except vessels licensed to buy salmon.

3. Cascade Head to Humbug Mountain, all-salmon season. There is no limit on the number of chinook that may be landed. To land coho, at least one chinook must be landed for each coho landed. This ratio may be adjusted inseason to assure complete harvest of the quota. Mixed loads of chinook and coho must be delivered within this management area. All chinook in possession must be delivered with the coho. There are no restrictions on the place of delivery of chinook-only loads. Chinook and coho salmon possessed or landed in this management area may not be returned or transferred to any vessels except vessels licensed to buy salmon.

4. Sisters Rocks to Punta Gorda, July 26-31, August 9-19 and August 23-31. This fishery will start as an all-salmon season, unless the south of Cape Falcon coho quota has already been met, and continue as an all-except-coho fishery if the coho quota is met prior to the chinook quota. To land coho during the all-salmon season, at least one chinook must be landed for each coho landed. This ratio may be adjusted inseason to assure complete harvest of the quota. All chinook and coho caught in this management area must be delivered within the area.

Table 1. Nontreaty Troll Option 1 proposed for 1990 ocean salmon fisheries (cont.).

E. QUOTAS

1. Chinook and coho quotas north of Cape Falcon. All nontreaty troll and recreational ocean fisheries will be limited by either (a) an overall 95,000 chinook quota, or (b) impacts on critical Washington coastal and Puget Sound natural coho stocks equivalent to the preseason coho quota of 400,000 (including hooking mortality associated with May-June chinook fisheries). The troll fishery will be limited by overall quotas of 47,500 chinook and 135,000 coho. The overall troll chinook quota is partitioned into an all-except-coho season subquota of 29,600 and an all-salmon season subquota of 17,900. Impacts from quota overages or underages from one fishing period or subarea will be subtracted from or added to later fishing periods of the same user group or transferred between the recreational and commercial fisheries in accordance with framework allocation transfer criteria.

2. Coho quotas south of Cape Falcon. The troll fishery from Cape Falcon to the U.S.-Mexico border will be limited to an overall combined catch and hooking mortality (impact quota) of 231,000 coho. The overall preseason catch quota for this impact is 141,000 coho. There is a 70 percent subarea impact ceiling (catch plus hooking mortality) within the overall impact quota which allows a harvest of no more than 81,000 coho south of Cascade Head. A subarea catch of 61,000 coho in the area between Cape Falcon and Cascade Head triggers a landing limit in that area requiring one chinook for each coho until the overall coho quota is reached. A separate subarea catch quota of 5,000 coho will be reserved preseason for the troll fishery south of Horse Mountain by deducting it from the overall preseason catch quota and the subarea catch ceiling. The subarea catch-quota reserve will be available upon attainment of the overall catch quota or the subarea catch ceiling minus the 5,000 deduction. If either the overall quota or 70 percent ceiling is exceeded before the fisheries can be closed, the overage will not be subtracted from the 5,000 coho reserve. An inseason rollover to the troll fishery of any portion of the south of Cape Falcon recreational quota projected to be in excess of sport fishery needs will be made about August 1.

3. Chinook quotas between Sisters Rocks and Punta Gorda. The troll fishery in this area will be limited by an overall quota of 29,700 chinook through August 31 (25,000 June equivalents). This quota is divided into two subquotas as follows: (1) 5,000 chinook for the May 1-14 fishery between Sisters Rocks and House Rock, and (2) 24,700 chinook for the entire area in the July 26-31, August 9-19 and August 23-31 fisheries. Any overages or underages in meeting a subquota for one time period will be subtracted from or added to the next troll fishery prior to August 31. There are two chinook quotas governing September and October troll fisheries of (1) 7,500 chinook between Sisters Rocks and Mack Arch and (2) 15,000 chinook between Trinidad Head and Punta Gorda.

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Table 2. Nontreaty Troll Option 2 proposed for 1990 ocean salmon fisheries. [Shaded areas are closed].

A. SEASONS

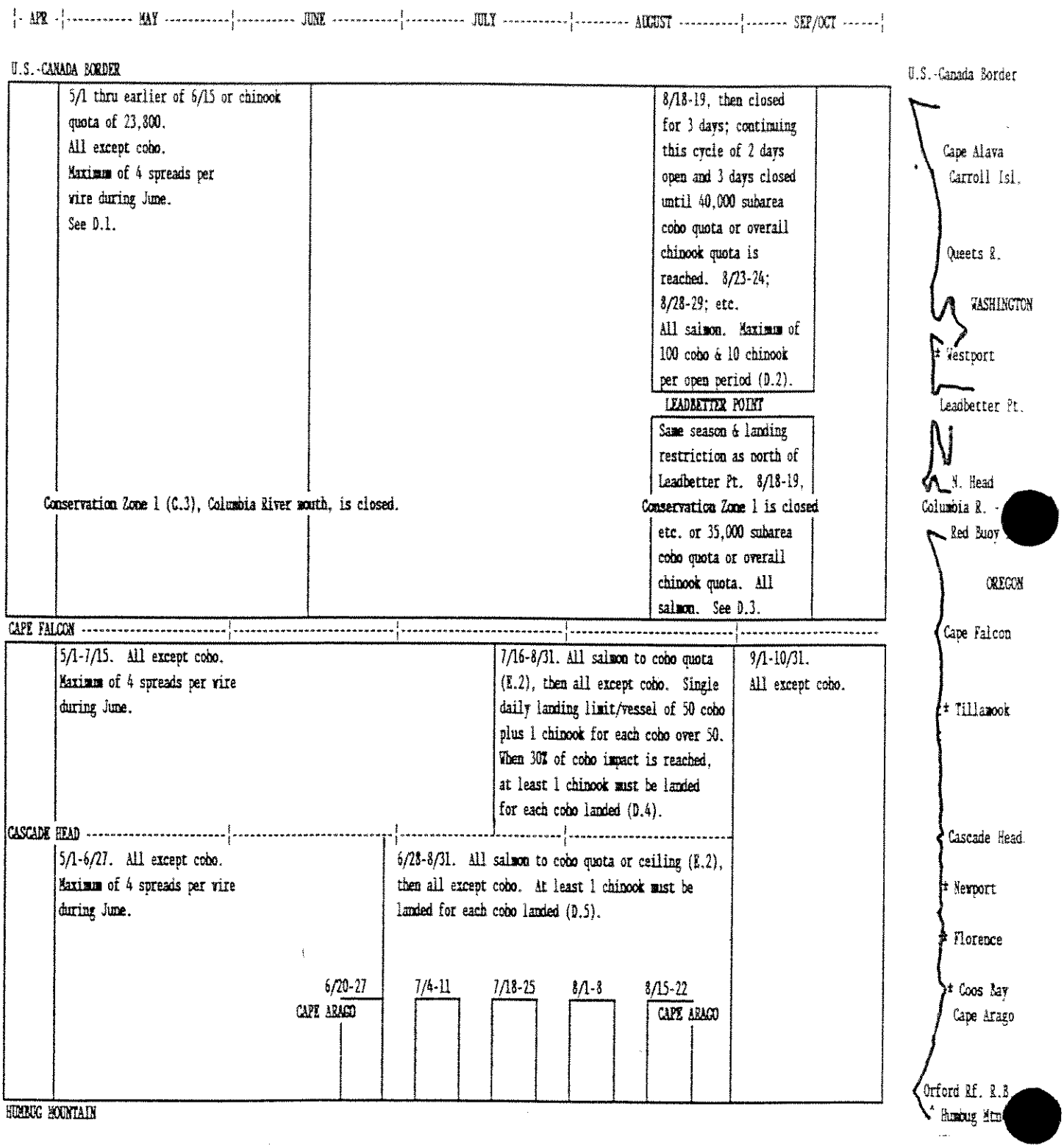

Table 2. Nontreaty Troll Option 2 proposed for 1990 ... (cont.). [Shaded areas are closed].

A. SEASONS (cont.)

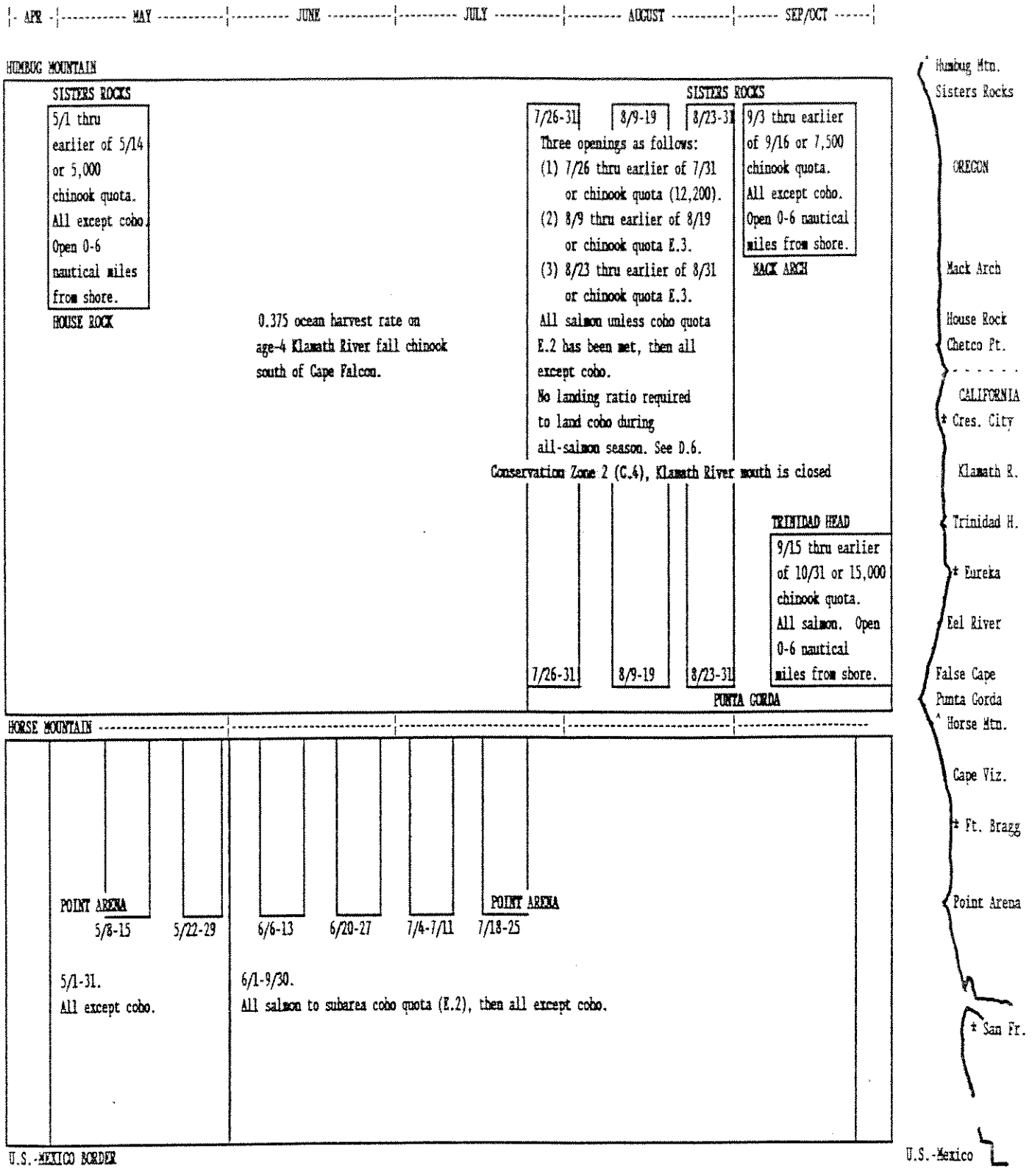

Table 2. Nontreaty Troll Option 2 proposed for 1990 ocean salmon fisheries (cont.).

B. MINIMUM SIZE LIMITS (inches)

[SAME AS OPTION 1]

C. GENERAL REQUIREMENTS, RESTRICTIONS AND EXCEPTIONS

[SAME AS OPTION 1]

D. POSSESSION, LANDING AND SPECIAL RESTRICTIONS BY MANAGEMENT AREA

If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgement of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board, and the estimated time of arrival.

1. U.S.-Canada border to Cape Falcon. Vessels possessing salmon taken in this management area and delivering to a port outside of the area must notify the U.S. Coast Guard and receive acknowledgement of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board, and the estimated time of arrival.

2. U.S.-Canada border to Leadbetter Point, all-salmon season. The fishery opens for two days then closes three days, continuing the cycle until the quota is reached. Vessels may land no more than 100 coho and 10 chinook during each open period (August 18-19, August 23-24, etc.) All fish must be landed north of Leadbetter Point within 24 hours of each closure. Any coho remaining unharvested when this fishery closes will be transferred to the Leadbetter Point to Cape Falcon troll fishery.

3. Leadbetter Point to Cape Falcon, all-salmon season. The fishery opens two days and then closes for three days, continuing this cycle until the quota is reached. Vessels may land no more than 100 coho and 10 chinook during each open period (August 18-19, August 23-24, etc.) All fish must be landed in the area within 24 hours of each closure. Fish may be landed north of Leadbetter Point after that fishery closes.

4. Cape Falcon to Cascade Head during all-salmon season. There is no limit on the number of chinook that may be landed. A single daily landing limit per vessel of 50 coho is permitted without also landing chinook. To land more than 50 coho, at least 1 chinook must be landed for each coho landed in excess of 50. The landing ratio may be adjusted inseason to assure harvest of the quota. When the estimated impact (combined catch and hooking mortality) in this area reaches 30 percent of the overall coho impact quota south of Cape Falcon, coho may only be landed in a one to one ratio with chinook until the overall coho quota has been met. Mixed loads of chinook and coho or coho-only loads must be delivered within this management area. All chinook in possession must be delivered with the coho. There are no restrictions on the place of delivery of chinook-only loads. Chinook and coho salmon possessed or landed in this management area may not be returned or transferred to any vessels except vessels licensed to buy salmon.

Table 2. Nontreaty Troll Option 2 proposed for 1990 ocean salmon fisheries (cont.).

5. Cascade Head to Humbug Mountain, all-salmon season. There is no limit on the number of chinook that may be landed. To land coho, at least one chinook must be landed for each coho landed. This ratio may be adjusted inseason to assure complete harvest of the quota. Mixed loads of chinook and coho must be delivered within this management area. All chinook in possession must be delivered with the coho. There are no restrictions on the place of delivery of chinook-only loads. Chinook and coho salmon possessed or landed in this management area may not be returned or transferred to any vessels except vessels licensed to buy salmon.

6. Sisters Rocks to Punta Gorda, July 26-31, August 9-19 and August 23-31. This fishery will start as an all-salmon season, unless the south of Cape Falcon coho quota has already been met, and continue as an all-except-coho fishery if the coho quota is met prior to the chinook quota. There is no landing ratio required to land coho during the all-salmon season. All chinook and coho caught in this management area must be delivered within the area.

E. QUOTAS

1. Chinook and coho quotas north of Cape Falcon. All nontreaty troll and recreational ocean fisheries will be limited by either (a) an overall 65,000 chinook quota, or (b) impacts on critical Washington coastal and Puget Sound natural coho stocks equivalent to the preseason coho quota of 300,000 (including hooking mortality associated with May-June chinook fisheries). The troll fishery will be limited by overall quotas of 32,500 chinook and 75,000 coho. The overall troll chinook quota is partitioned into an all-except-coho season subquota of 23,800 and an all-salmon season subquota of 8,700. The overall troll coho quota is partitioned into 40,000 coho north of Leadbetter Point and 35,000 coho south of Leadbetter Point. Impacts from quota overages or underages from one fishing period or subarea will be subtracted from or added to later fishing periods of the same user group or transferred between the recreational and commercial fisheries in accordance with framework allocation transfer criteria.

2. Coho quotas south of Cape Falcon. The troll fishery from Cape Falcon to the U.S.-Mexico border will be limited to an overall combined catch and hooking mortality (impact quota) of 246,000 coho. The overall preseason catch quota for this impact is 160,000 coho. There is a 70 percent subarea impact ceiling (catch plus hooking mortality) within the overall impact quota which allows a harvest of no more than 95,000 coho south of Cascade Head. A subarea catch of 66,000 coho in the area between Cape Falcon and Cascade Head triggers landing limits in that area requiring one chinook for each coho until the overall coho quota has been met. A separate subarea catch quota of 5,000 coho will be reserved preseason for the troll fishery south of Horse Mountain by deducting it from the overall preseason catch quota and the subarea catch ceiling. The subarea catch-quota reserve will be available upon attainment of the overall catch quota or the subarea catch ceiling minus the 5,000 deduction. If either the overall quota or 70 percent ceiling is exceeded before the fisheries can be closed, the overage will not be subtracted from the 5,000 coho reserve. An inseason rollover to the troll fishery of any portion of the south of Cape Falcon recreational quota projected to be in excess of sport fishery needs will be made about August 1.

3. Chinook quotas between Sisters Rocks and Punta Gorda. The troll fishery in this area will be limited by an overall quota of 17,200 chinook through August 31 (15,000 June equivalents). This quota is divided into two subquotas as follows: (1) 5,000 chinook for the May 1-14 fishery between Sisters Rocks and House Rock, and (2) 12,200 chinook for the entire area in the July 26-31, August 9-19 and August 23-31 fisheries. Any overages or underages in meeting a subquota for one time period will be subtracted from or added to the next troll fishery prior to August 31. There are two chinook quotas governing September troll fisheries of (1) 7,500 chinook between Sisters Rocks and Mack Arch and (2) 15,000 chinook between Trinidad Head and Punta Gorda.

Table 3. Nontreaty Troll Option 3 proposed for 1990 ocean salmon fisheries. [Shaded areas are closed].

A. SEASONS

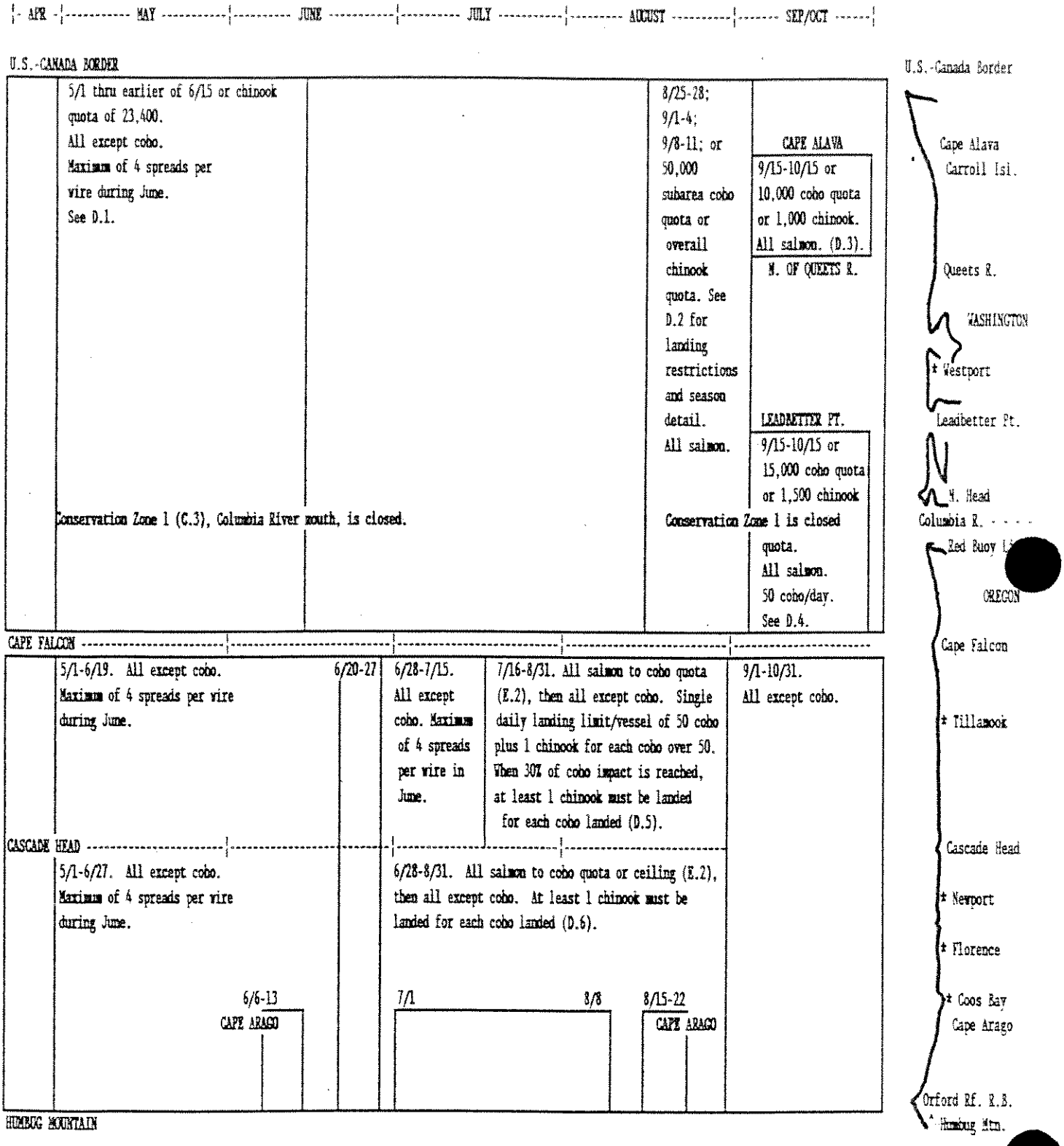

Table 3. Nontreaty Troll Option 3 proposed for 1990 ... (cont.). [Shaded areas are closed].

A. SEASONS (cont.)

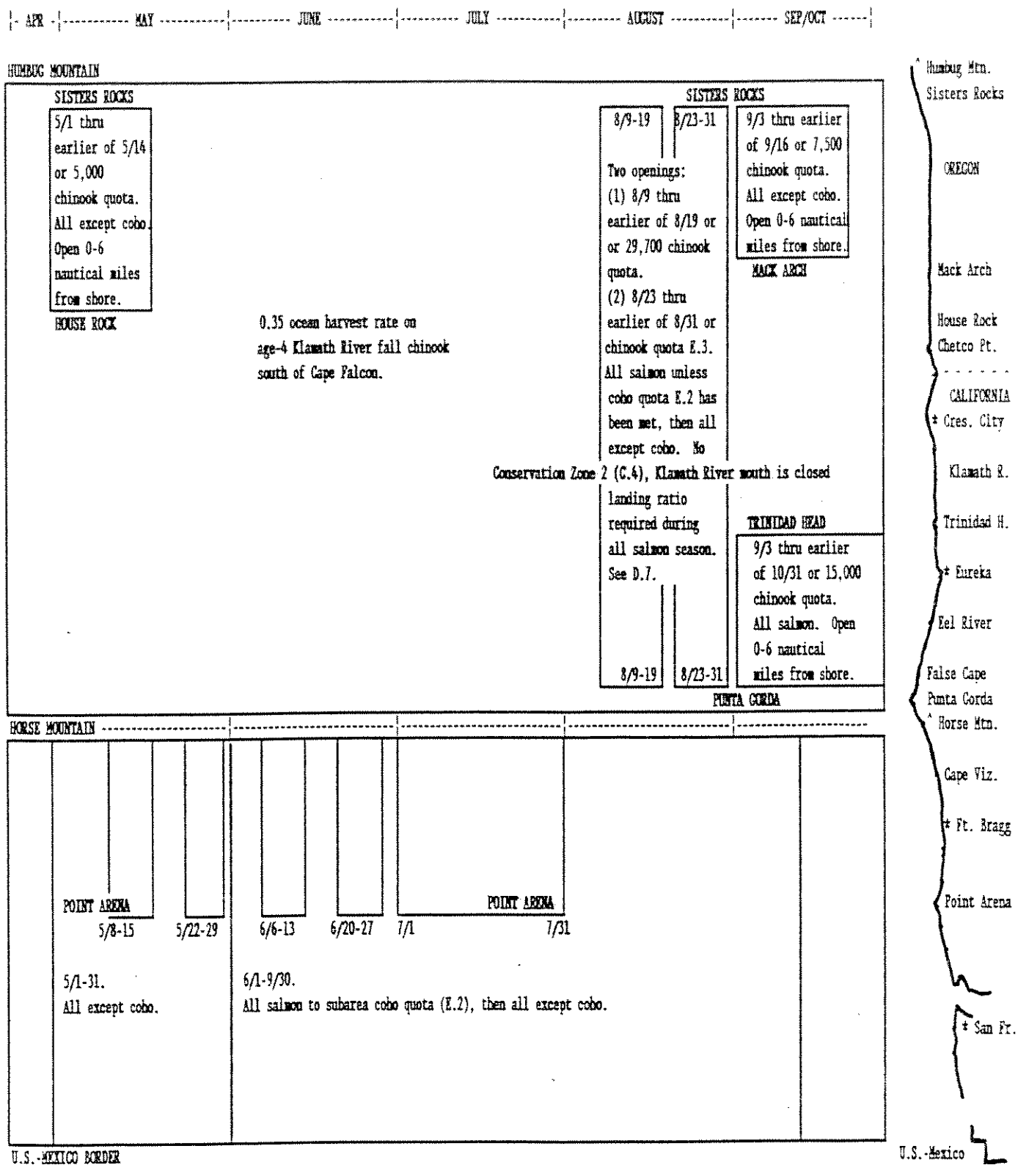

Table 3. Nontreaty Troll Option 3 proposed for 1990 ocean salmon fisheries (cont.).

B. MINIMUM SIZE LIMITS (inches)

[SAME AS OPTION 1]

C. GENERAL REQUIREMENTS, RESTRICTIONS AND EXCEPTIONS

[SAME AS OPTION 1]

D. POSSESSION, LANDING AND SPECIAL RESTRICTIONS BY MANAGEMENT AREA

If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgement of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board, and the estimated time of arrival.

1. U.S.-Canada border to Cape Falcon. Vessels possessing salmon taken in this management area and delivering to a port outside of the area must notify the U.S. Coast Guard and receive acknowledgement of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board, and the estimated time of arrival.

2. U.S.-Canada border to Cape Falcon, all-salmon season. The fishery will follow a cycle of four days open and three days closed until the quota is reached. Each participating vessel may land no more than 20 chinook and 200 coho during the first open period. The landing limit may be adjusted up or down for additional open periods after the first one to aid in achieving each quota. Any coho remaining unharvested when this fishery closes will be transferred to later troll fisheries.

3. Cape Alava to a boundary 5 to 10 miles north of the Queets River) inside 3 miles, all-salmon season. This is a limted participation fishery with preregistration required with Washington Department of Fisheries by July 1, 1990. If over 10 vessels apply, a random selection (drawing) will occur. The fishery will open for three days and close two days for evaluation. Vessels must land and deliver within 24 hours of the closure at Neah Bay, LaPush or Westport. Fishery reopens on September 20 if enough harvest remains to proceed with at least 1 day of fishing. Onboard observers may be required to participate.

4. Leadbetter Point to Cape Falcon, all-salmon season. A single daily landing limit of 50 coho. No restriction on chinook. All salmon caught in the area must be landed in the area.

5. Cape Falcon to Cascade Head during all-salmon season. There is no limit on the number of chinook that may be landed. A single daily landing limit per vessel of 50 coho is permitted without also landing chinook. To land more than 50 coho, at least 1 chinook must be landed for each coho landed in excess of 50. The landing ratio may be adjusted inseason to assure harvest of the quota. When the estimated impact (combined catch and hooking mortality) in this area reaches 30 percent of the overall coho impact quota south of Cape Falcon, coho may only be landed in a one to one ratio with chinook until the overall coho quota has been met. Mixed loads of chinook and coho or coho-only loads must be delivered within this management area. All chinook in possession must be delivered with the coho. There are no restrictions on the place of delivery of chinook-only loads. Chinook and coho salmon possessed or landedin this management area may not be returned or transferred to any vessels except vessels licensed to buy salmon.

Table 3. Nontreaty Troll Option 3 proposed for 1990 ocean salmon fisheries (cont.).

6. Cascade Head to Humbug Mountain, all-salmon season. There is no limit on the number of chinook that may be landed. To land coho, at least one chinook must be landed for each coho landed. This ratio may be adjusted inseason to assure complete harvest of the quota. Mixed loads of chinook and coho must be delivered within this management area. All chinook in possession must be delivered with the coho. There are no restrictions on the place of delivery of chinook-only loads. Chinook and coho salmon possessed or landed in this management area may not be returned or transferred to any vessels except vessels licensed to buy salmon.

7. Sisters Rocks to Punta Gorda, August 9-19 and August 23-31. This fishery will start as an all-salmon season, unless the south of Cape Falcon coho quota has already been met, and continue as an all-except-coho fishery if the coho quota is met prior to the chinook quota. There is no landing ratio required to land coho during the all-salmon season. All chinook and coho caught in this management area must be delivered within the area.

E. QUOTAS

1. Chinook and coho quotas north of Cape Falcon. All nontreaty troll and recreational ocean fisheries will be limited by either (a) an overall 65,000 chinook quota, or (b) impacts on critical Washington coastal and Puget Sound natural coho stocks equivalent to the preseason coho quota of 300,000 (including hooking mortality associated with May-June chinook fisheries). The troll fishery will be limited by overall quotas of 32,500 chinook and 75,000 coho. The overall troll chinook quota is partitioned into an all-except-coho season subquota of 23,400 and an overall all-salmon season subquota of 9,100. The overall troll coho quota is partitioned into 50,000 coho for the initial all-salmon season; 10,000 coho for the late season north of Leadbetter Point and 15,000 coho for the late season south of Leadbetter Point. Impacts from quota overages or underages from one fishing period or subarea will be subtracted from or added to later fishing periods of the same user group or transferred between the recreational and commercial fisheries in accordance with framework allocation transfer criteria.

2. Coho quotas south of Cape Falcon. The troll fishery from Cape Falcon to the U.S.-Mexico border will be limited to an overall combined catch and hooking mortality (impact quota) of 239,000 coho. The overall preseason catch quota for this impact is 172,000 coho. There is a 70 percent subarea impact ceiling (catch plus hooking mortality) within the overall quota which allows a harvest of no more than 108,000 coho south of Cascade Head. A subarea catch of 65,000 coho in the area between Cape Falcon and Cascade Head triggers landing limits in that area requiring one chinook for each coho until the overall coho quota has been met. A separate subarea catch quota of 5,000 coho will be reserved preseason for the troll fishery south of Horse Mountain by deducting it from the overall preseason catch quota and the subarea catch ceiling. The subarea catch-quota reserve will be available upon attainment of the overall catch quota or the subarea catch ceiling minus the 5,000 deduction. If either the overall quota or 70 percent ceiling is exceeded before the fisheries can be closed, the overage will not be subtracted from the 5,000 coho reserve. An inseason rollover to the troll fishery of any portion of the south of Cape Falcon recreational quota projected to be in excess of sport fishery needs will be made about August 1.

3. Chinook quotas between Sisters Rocks and Punta Gorda. The troll fishery in this area is limited by an overall quota of 34,700 chinook through August 31. This quota is divided into two subquotas: (1) 5,000 chinook for the May 1-14 fishery between Sisters Rocks and House Rock, and (2) 29,700 chinook for the entire area in the August fisheries. Any overages or underages in meeting a subquota for one time period will be subtracted from or added to the next troll fishery prior to August 31. There are two chinook quotas governing September and October troll fisheries of (1) 7,500 chinook between Sisters Rocks and Mack Arch and (2) 15,000 chinook between Trinidad Head and Punta Gorda.

Table 4. Recreational Option 1 proposed for 1990 ocean salmon fisheries. [Shaded areas are closed.]

A. SEASONS, SUBAREA QUOTAS, SPECIES AND BAG LIMITS

FEB-APR	MAY	JUNE	JULY	AUGUST	SEP/OCT/NOV
U.S.-CANADA BORDER					
	5/27 thru earlier of 6/14 or chinook guideline of 5,000. Open Sunday thru Thursday only. All except coho.	6/18 thru earliest of 9/20 or overall chinook quota or coho subarea quota of 26,500. Open Sunday-Thursday only. All salmon. 2 fish/day. Inseason management measures (C.6) may be used to maintain season duration and to keep chinook harvest within a guideline of 4,900.			
QUEETS RIVER	2 fish/day.				
		6/18 thru earliest of 9/20 or overall chinook quota or coho subarea quota of 103,900. Open Sunday-Thursday only. All salmon. 2 fish/day. Inseason management measures (C.6) may be used maintain season duration and to keep chinook harvest within a guideline of 22,800.			
LEADBETTER PT.					
		6/18 thru earliest of 9/20 or overall chinook quota or coho subarea quota of 130,300. Open Sunday-Thursday only. All salmon. 2 fish/day.			
	Conservation Zone 1 (C.2), Columbia R. mouth, closed				
		Inseason management measures (C.6) may be used to maintain season duration and to keep chinook harvest within a guideline of 14,800.			
CAPE FALCON					
	5/1-5/27. All salmon. 2 fish/day; no more than 6 fish in 7 consecutive days. Open only within the 27 fathom curve (C.5).	5/28 thru earlier of 9/16 or coho quota (D.2). All salmon. 2 fish/day; no more than 6 fish in 7 consecutive days.			
HUMBUG MOUNTAIN					
	5/1-9/9. All salmon. 2 fish/day; except 7/1-8/15 only one may be a chinook; no more than 6 fish in 7 consecutive days. Cons. Zone 2 (C.3) closed				TRINIDAD HEAD
					9/10-10/31. All salmon. 2 fish/day. Open 0-6 nautical miles from shore.
					PUNTA GORDA
HORSE MOUNTAIN					
Nearest Saturday to 2/15 thru nearest Sunday to 11/15. All salmon. 2 fish/day. Conservation Zone 3 (C.4), mouth of San Francisco Bay, is closed 3/1-4/30 and 11/1-4/30/91.					
U.S.-MEXICO BORDER					

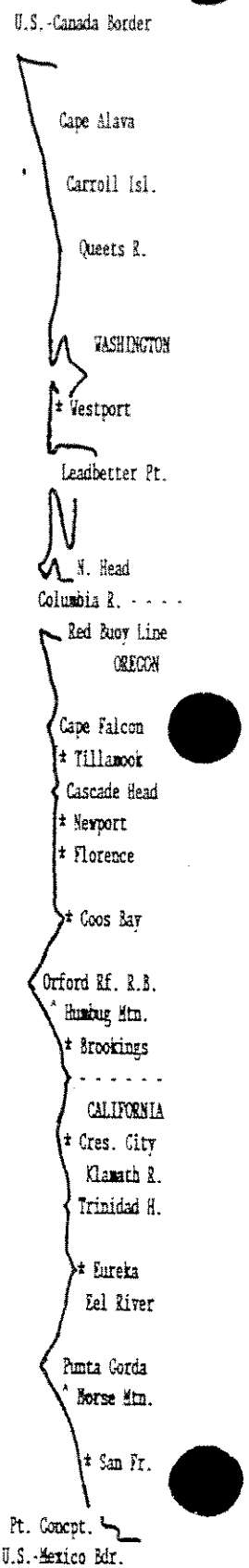

Table 4. Recreational Option 1 proposed for 1990 ocean salmon fisheries (cont.).

B. MINIMUM SIZE LIMITS (total length in inches)

	Chinook	Coho	Pink
North of Cape Falcon	24.0	16.0	None
Cape Falcon to Humbug Mountain	20.0	16.0	None
South of Humbug Mountain	20.0	20.0	None, except 20.0 off CA

C. SPECIAL REQUIREMENTS, RESTRICTIONS AND EXCEPTIONS

1. Single point, single shank barbless hooks are required north of Point Conception, California.

2. Conservation Zone 1. The ocean area surrounding the Columbia River mouth bounded by a line extending for 6 nautical miles due west from North Head along 46°18'00" N. latitude to 124°13'18" W. longitude, then southerly along a line of 167° True to 46°11'06" N. latitude and 124°11'00" W. longitude (Columbia River Buoy), then northeast along Red Buoy Line to the tip of the south jetty, is closed.

3. Conservation Zone 2. The ocean area surrounding the Klamath River mouth bounded on the north by 41°38'48" N. latitude (approximately 6 nautical miles north of the Klamath river mouth), on the west by 124°23'00" W. longitude (approximately 12 nautical miles off shore), and on the south by 41°26'48" N. latitude (approximately 6 nautical miles south of the Klamath River mouth), is closed August 1 through August 31.

4. Conservation Zone 3 (Sacramento River winter-run chinook conservation closure). The ocean area bounded by a line commencing at Seal Rocks then to a point on the coast a distance of 5 nautical miles 155°; then along a line at 288° for 7.4 nautical miles to buoy #2; then along a straight line to buoy #1; then from buoy #1 along a line 12° to a point on the coast a distance of 5.7 nautical miles north and along a line at 133° for 5.2 nautical miles to the point of beginning, is closed March 1 through April 30 and November 1, 1990 through April 30, 1991.

5. The 27 fathom curve is defined as follows: Within an area bounded by a line from Cape Falcon to 45°46'00" N., 124°01'20" W. (approximately 1.6 nautical miles west of Cape Falcon) to 45°04'15" N., 124°04'00" W. (approximately 2.2 nautical miles northwest of Cascade Head) to 44°40'40" N., 124°09'15" W. (approximately 3 nautical miles west of Yaquina Head) to 44°08'30" N., 124°12'00" W. (approximately 3 nautical miles west of Heceta Head) to 43°40'15" N., 124°14'30" W. (approximately 0.5 nautical miles west of the Umpqua Whistle Buoy) to 43°31'30" N., 124°17'00" W. (approximately 1.7 nautical miles west of the beach) to 43°15'15" N., 124°28'00" W. (approximately 3 nautical miles west of the beach) to 43°01'30" N., 124°29'05" W. (approximately 2 nautical miles west of Four Mile Creek) to 42°56'00" N., 124°33'10" W. (approximately 2.4 miles west of the mouth of Floras Creek) to 42°50'20" N., 124°38'30" W. (approximately 3.4 nautical miles west of Cape Blanco) to 42°40'30" N., 124°28'45" W. (approximately 1.1 nautical mile west of Humbug Mountain) to Humbug Mountain.

6. Inseason management actions may be taken north of Cape Falcon to extend the duration of the fishery to the end of its scheduled season or to keep within chinook harvest guidelines for each of the three subareas. Such actions might include: closure from 0 to 3, or 0 to 6, or 3 to 200, or 5 to 200 nautical miles from shore; close from a point extending due west from Tatoosh Island for 5 miles, then south to a point due west of Umatilla Reef Buoy, then due east to shore; close from the North Head at the Columbia River mouth north to Leadbetter Point; and change species which may be landed.

7. Impacts north of Cape Falcon are based on a Buoy 10 fishery (Columbia River mouth to Astoria-Megler Bridge) with a harvest guideline of 200,000 coho and 30,000 chinook. For impact analysis, a catch of 130,000 coho is assumed for the period prior to August 27 and 70,000 coho after August 27.

8. Consistent with Council management objectives, the State of Oregon may establish some additional late season, all-salmon-except-coho fisheries in state waters.

D. QUOTAS

1. Chinook and coho quotas north of Cape Falcon. All nontreaty troll and recreational ocean fisheries will be limited by either (a) an overall 95,000 chinook quota, or (b) impacts on critical Washington coastal and Puget Sound natural coho stocks equivalent to the preseason coho quota of 400,000 (including hooking mortality associated with May-June chinook fisheries). The recreational fishery will be limited by overall catch quotas of 47,500 chinook and 260,700 coho (impact quota of 265,000 coho). Impacts from quota (or guideline) overages or underages from each fishing period or subarea will be subtracted from or added to later fishing periods of the same user group, or transferred between the recreational and commercial fisheries in accordance with the framework allocation.

   The recreational total allowable harvest north of Cape Falcon is divided equally north and south of Leadbetter Point. North of Leadbetter Point, except in the case of an Area 4B fishery, the allowable catch (50 percent of the total) is divided to provide 26 percent and 74 percent to the area north of the Queets River and the area south of the Queets River to Leadbetter Point, respectively. If there is an Area 4B fishery, 25 percent of the allowable Area 4B catch will be added to the north of Leadbetter Point quota, the 24/76 percent split calculated, and then 25 percent of the Area 4B fishery subtracted from the calculated allowable catch north of the Queets River to again meet the total north of Leadbetter Point quota. [see Attachment A]

2. Coho quotas south of Cape Falcon. Overall recreational catch for Option 1 is limited to 233,000 coho salmon from Cape Falcon to the U.S.-Mexico border. Any portion of the recreational quota not needed to complete scheduled recreational seasons will be reallocated to the commercial fishery about August 1. The fishery south of Humbug Mountain does not close if the recreational coho quota is reached.

Table 5. Recreational Option 2 proposed for 1990 ocean salmon fisheries. [Shaded areas are closed.]

A. SEASONS, SUBAREA QUOTAS, SPECIES AND BAG LIMITS

FEB-APR	MAY	JUNE	JULY	AUGUST	SEP/OCT/NOV
U.S.-CANADA BORDER					
QUEETS RIVER	5/27 thru earlier of 6/11 or chinook guideline of 5,000. Open Sunday thru Monday only. All salmon. 2 fish/day. Open 0-6 nautical miles from U.S.-Canada border to Leadbetter Point. Open 0-3 nautical miles from Leadbetter Point to North Head.		7/2 thru earliest of 9/20 or overall chinook quota or coho subarea quota of 23,900. Open Sunday-Thursday only. All salmon. 2 fish/day. Inseason management measures (C.6) may be used to maintain season duration and to keep chinook harvest within a guideline of 3,500.		
LEADBETTER PT.			6/25 thru earliest of 9/20 or overall chinook quota or coho subarea quota of 82,200. Open Sunday-Thursday only. All salmon. 2 fish/day. Inseason management measures (C.6) may be used maintain season duration and to keep chinook harvest within a guideline of 14,400.		
NORTH HEAD			6/24 thru earliest of 9/20 or overall chinook quota or coho subarea quota of 106,000. Open Sunday-Thursday only. All salmon. 2 fish/day. Conservation Zone 1 (C.2), Columbia R. mouth, closed Inseason management measures (C.6) may be used to maintain season duration and to keep chinook harvest within a guideline of 9,600.		
CAPE FALCON	5/1-5/27. All salmon. 2 fish/day; no more than 6 fish in 7 consecutive days. Open only within the 27 fathom curve (C.5).	5/28 thru earlier of 9/9 or coho quota (D.2). Except: Closed 8/1-8/10 if needed to maintain season season duration as a result of STT evaluation on 7/24. All salmon. 2 fish/day; no more than 6 fish in 7 consecutive days.			
HUMBUG MOUNTAIN	5/1-9/9; Except: Closed Tuesdays and Wednesdays from 7/10-8/15. All salmon. 2 fish/day; no more than 6 fish in 7 consecutive days.		Cons. Zone 2 (C.3) closed	TRINIDAD HEAD	9/10-10/31. All salmon. 2 fish/day. Open 0-6 nautical miles from shore.
HORSE MOUNTAIN				PUNTA GORDA	
	Nearest Saturday to 2/15 thru nearest Sunday to 11/15. All salmon. 2 fish/day. Conservation Zone 3 (C.4), mouth of San Francisco Bay, is closed 3/1-4/30 and 11/1-4/30/91.				
U.S.-MEXICO BORDER					

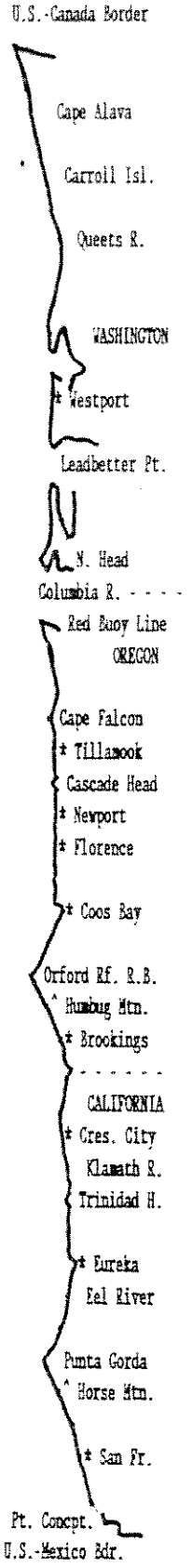

Table 5. Recreational Option 2 proposed for 1990 ocean salmon fisheries (cont.).

B. MINIMUM SIZE LIMITS (total length in inches)

[Same as Option 1]

C. SPECIAL REQUIREMENTS, RESTRICTIONS AND EXCEPTIONS

[Same as Option 1]

D. QUOTAS

1. Chinook and coho quotas north of Cape Falcon. All nontreaty troll and recreational ocean fisheries will be limited by either (a) an overall 65,000 chinook quota, or (b) impacts on critical Washington coastal and Puget Sound natural coho stocks equivalent to the preseason coho quota of 300,000 . The recreational fishery will be limited by overall catch quotas of 32,500 chinook and 225,000 coho. Impacts from quota (or guideline) overages or underages from each fishing period or subarea will be subtracted from or added to later fishing periods of the same user group, or transferred between the recreational and commercial fisheries in accordance with the framework allocation.

   The recreational total allowable harvest north of Cape Falcon is divided equally north and south of Leadbetter Point. North of Leadbetter Point, except in the case of an Area 4B fishery, the allowable catch (50 percent of the total) is divided to provide 26 percent and 74 percent to the area north of the Queets River and the area south of the Queets River to Leadbetter Point, respectively. If there is an Area 4B fishery, 25 percent of the allowable Area 4B catch will be added to the north of Leadbetter Point quota, the 24/76 percent split calculated, and then 25 percent of the Area 4B fishery subtracted from the calculated allowable catch north of the Queets River to again meet the total north of Leadbetter Point quota. [see Attachment A]

2. Coho quotas south of Cape Falcon. Overall recreational catch for Option 2 is limited to 235,000 coho salmon from Cape Falcon to the U.S.-Mexico border. Any portion of the recreational quota not needed to complete scheduled recreational seasons will be reallocated to the commercial fishery about August 1. The fishery south of Humbug Mountain does not close if the recreational coho quota is reached.

Table 6. Recreational Option 3 proposed for 1990 ocean salmon fisheries. [Shaded areas are closed.]

A. SEASONS, SUBAREA QUOTAS, SPECIES AND BAG LIMITS

FEB-APR	MAY	JUNE	JULY	AUGUST	SEP/OCT/NOV
U.S.-CANADA BORDER					
			7/2 thru earliest of 9/20 or overall chinook quota or coho subarea quota of 25,500. Open Sunday-Thursday only. All salmon. 2 fish/day. Inseason management measures (C.6) may be used to maintain season duration and to keep chinook harvest within a guideline of 4,200.		
QUEETS RIVER					
			6/25 thru earliest of 9/20 or overall chinook quota or coho subarea quota of 87,000. Open Sunday-Thursday only. All salmon. 2 fish/day. Inseason managment measures (C.6) may be used maintain season duration and to keep chinook harvest within a guideline of 16,900.		
LEADBETTER PT.					
			6/24 thru earliest of 9/20 or overall chinook quota or coho subarea quota of 112,500. Open Sunday-Thursday only. All salmon. 2 fish/day. Conservation Zone 1 (C.2), Columbia R. mouth, closed Inseason management measures (C.6) may be used to maintain season duration and to keep chinook harvest within a guideline of 11,400.		
CAPE FALCON					
	5/1-5/27. All salmon. 2 fish/day; no more than 6 fish in 7 consecutive days. Open only within the 27 fathom curve (C.5).	5/28-6/22. All salmon. 2 fish/day; no more than 6 fish in 7 consecutive days.		6/30 thru earlier of 9/9 or coho quota (D.2). Except: Closed 8/1-8/7 if needed to maintain season duration as a result of STT evaluation on 7/24. All salmon. 2 fish/day; no more than 6 fish in 7 consecutive days.	
HUMBUG MOUNTAIN					
	5/1-7/22. All salmon. 2 fish/day; no more than 6 fish in 7 consecutive days.			7/30-9/30. All salmon. 2 fish per day; no more than 6 fish in 7 consecutive days. Cons. Zone 2 (C.3) closed	TRINIDAD HEAD: 10/1-31. All salmon. 2 fish/day. Open 0-6 n. miles off shore. PUNTA GORDA
HORSE MOUNTAIN					
Nearest Saturday to 2/15 thru nearest Sunday to 11/15. All salmon. 2 fish/day. Conservation Zone 3 (C.4), mouth of San Francisco Bay, is closed 3/1-4/30 and 11/1-4/30/91.					
U.S.-MEXICO BORDER					

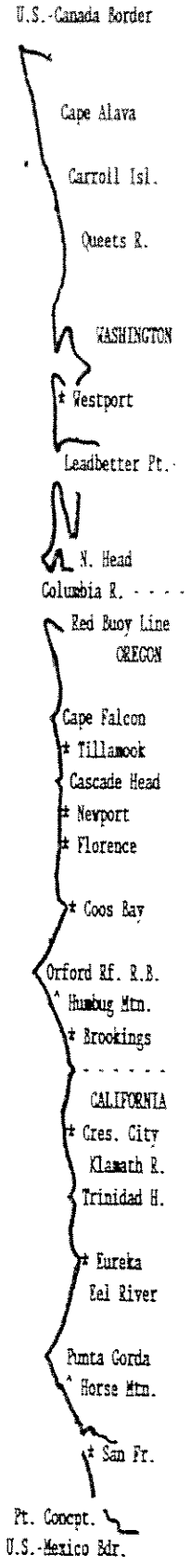

Table 6. Recreational Option 3 proposed for 1990 ocean salmon fisheries (cont.).

B. MINIMUM SIZE LIMITS (total length in inches)

[Same as Option 1]

C. SPECIAL REQUIREMENTS, RESTRICTIONS AND EXCEPTIONS

[Same as Option 1]

D. QUOTAS

1. Chinook and coho quotas north of Cape Falcon. All nontreaty troll and recreational ocean fisheries will be limited by either (a) an overall 65,000 chinook quota, or (b) impacts on critical Washington coastal and Puget Sound natural coho stocks equivalent to the preseason coho quota of 300,000. The recreational fishery will be limited by overall catch quotas of 32,500 chinook and 225,000 coho. Impacts from quota (or guideline) overages or underages from each fishing period or subarea will be subtracted from or added to later fishing periods of the same user group, or transferred between the recreational and commercial fisheries in accordance with the framework allocation.

   The recreational total allowable harvest north of Cape Falcon is divided equally north and south of Leadbetter Point. North of Leadbetter Point, except in the case of an Area 4B fishery, the allowable catch (50 percent of the total) is divided to provide 26 percent and 74 percent to the area north of the Queets River and the area south of the Queets River to Leadbetter Point, respectively. If there is an Area 4B fishery, 25 percent of the allowable Area 4B catch will be added to the north of Leadbetter Point quota, the 24/76 percent split calculated, and then 25 percent of the Area 4B fishery subtracted from the calculated allowable catch north of the Queets River to again meet the total north of Leadbetter Point quota. [see Attachment A]

2. Coho quotas south of Cape Falcon. Overall recreational catch for Option 2 is limited to 234,000 coho salmon from Cape Falcon to the U.S.-Mexico border. Any portion of the recreational quota not needed to complete scheduled recreational seasons will be reallocated to the commercial fishery about August 1. The fishery south of Humbug Mountain does not close if the recreational coho quota is reached.

Table 7. Estimated catch and ex-vessel values generated by management area for troll fishery regulatory options.

Management Area	Option	Expected Catches a/ (thousands) Chinook	Coho	Ex-Vessel Value b/ (thousands $) 1990	1989	Percent Change From 1989
North of Cape Falcon	1	n/a	n/a	n/a	1,385	
	2	n/a	n/a	n/a		
	3	n/a	n/a	n/a		
Cape Falcon to Humbug Mountain	1	228	195	6,560	9,488	-31%
	2	236	212	6,839		-28%
	3	215	207	6,298		-34%
Humbug Mountain to Horse Mountain	1	52.2	9	1,332	1,019	31%
	2	39.7	9	1,039		2%
	3	57.2	14	1,510		48%
South of Horse Mountain	1	640	27	16,100	12,568	28%
	2	602	26	15,150		21%
	3	564	19	14,142		13%
Total South of Cape Falcon	1	920	231	23,993	23,075	4%
	2	878	247	23,029		-0%
	3	836	240	21,949		-5%

a/ All expected catches are based on analysis of the impacts of the proposed regulations on historical use patterns, except for the chinoook catch between Humbug Mountain and Horse Mountain and the chinook and coho catch north of Cape Falcon, which are based on quotas.

b/ Ex-vessel values are not comparable to the community income impacts shown in Table 8.

Table 8. Estimated angler trips and coastal community income generated by management area for sport ocean salmon fishery regulatory options.

Management Area	Option	Angler Trips a/ (thousands) 1990	1989	Coastal Community Income Impacts b/ (thousands $) 1990	1989	Percent Change From 1989
North of Cape Falcon	1	n/a	162	n/a	9,240	
	2	n/a		n/a		
	3	n/a		n/a		
Cape Falcon to Humbug Mountain	1	185	181	8,620	8,420	2%
	2	180		8,387		0%
	3	176		8,201		-3%
Humbug Mountain to Horse Mountain	1	143	143	6,532	6,532	0%
	2	143		6,532		0%
	3	132		6,044		-7%
South of Horse Mountain	1	161	161	12,795	12,795	0%
	2	161		12,795		0%
	3	161		12,795		0%
Total South of Cape Falcon	1	488	484	27,947	27,747	1%
	2	483		27,714		0%
	3	468		27,039		-3%

a/ North of Cape Falcon 1990 angler trips are based on 1989 success rates. South of Cape Falco estimates of angler trips are based on historical effort adjusted for the season structures under the different regulatory options.

b/ Income impacts are totals for the individual coastal communities. Impacts between communities in the management area have not been counted. Income impacts are not comparable to the ex-vessel values shown in Table 7.

ATTACHMENT A

The allocation of the recreational coho TAC north of Cape Falcon in all options (50/50 north and south of Leadbetter Point) has been agreed upon by all Salmon Advisory Subpanel representatives, assuming no major changes in 1990 abundance predictions.

The distribution of the allocation in these options between the areas from Leadbetter Point to Queets River and Queets River to Canada is 74 percent/26 percent except if there is an Area 4B fishery. Then 25 percent of its value is added to the north of Leadbetter Point quota, the percentages applied, and then the 25 percent value subtracted out of the Neah Bay fishery to bring the north of Leadbetter Point quota back to par as displayed below.

TAC = 300
Recreational TAC = 225
North of Leadbetter Point = 112.5

Area 4B	Neah Bay	Westport
0	29,250	83,250
20	25,550	86,950
40	21,850	90,650

TAC = 400
Recreational TAC = 265
North of Leadbetter Point = 132.5

Area 4B	Neah Bay	Westport
0	34,450	98,050
20	30,750	101,750
40	27,050	105,450

Note: These numbers are presented as an example of how the recreational allocation formula is applied. Actual quotas are calculated after coho hooking mortality estimates associated with May through June all-species-except coho fisheries are subtracted off the recreational TAC.

ERRATA SHEET

FOR

REVIEW OF 1989 OCEAN SALMON FISHERIES

Page IV-16, last paragraph. The ex-vessel value of the pink harvest was seven percent of the total ex-vessel value in Washington, not seven tenths of one percent.

Page IV-18, table IV-9. Values for this table are **not** in thousands.

Page IV-24, paragraph 2, second sentence; page IV-24, paragraph 3, first sentence, and page IV-35, paragraph 1, first sentence. The following text should be added to the end of each of the sentences: " . . . and an increase in the total allowable catch."

Page IV-29, table IV-17. Local personal income attributed to recreational days is $1,454,800 for Tillamook and $12,326,600 for all Oregon coastal communities, not $118,300 and $10,990,200, respectively. The Oregon state total is correct.

DEPARTMENT of the INTERIOR
news release

BUREAU OF RECLAMATION
Mid-Pacific Region
2800 Cottage Way
Sacramento, CA 95825-1898

MP-90-16

Jeffrey S. McCracken
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ATTACHMENT 4

FOR IMMEDIATE RELEASE: March 9, 1990

DRY CONDITIONS PREVAIL; RECLAMATION'S UPDATED FORECAST CONTINUES TO REFLECT WATER SUPPLY CUTBACKS

The 50-percent deficiencies in Central Valley Project water deliveries announced on February 15 remain unchanged by the series of recent storms in the region according to Bureau of Reclamation forecasters. The shortages are the result of 4 consecutive dry years characterized by continued lower than normal precipitation and snowpack and poor reservoir storage conditions.

As announced in the February forecast, the available supplies for water year 1990 are forecast as follows:

- **50 percent supply for agricultural contractors**
- **75 percent supply for Sacramento River water rights holders and San Joaquin River exchange contractors**
- **75 percent or 50 percent supply to municipal and industrial water contractors as provided in their individual contracts with Reclamation.**

Reclamation will continue to review precipitation, snowpack, and reservoir storage data to analyze the cumulative effects of the remaining precipitation season on the overall water supply outlook. However, because 75 percent of the precipitation season is over, the water supply outlook is unlikely to change.

-DOI-

CENTRAL VALLEY PROJECT
INITIAL 1990 WATER SUPPLY FORECAST

U.S. Bureau of Reclamation
Mid-Pacific Region
February 15, 1990

SUMMARY

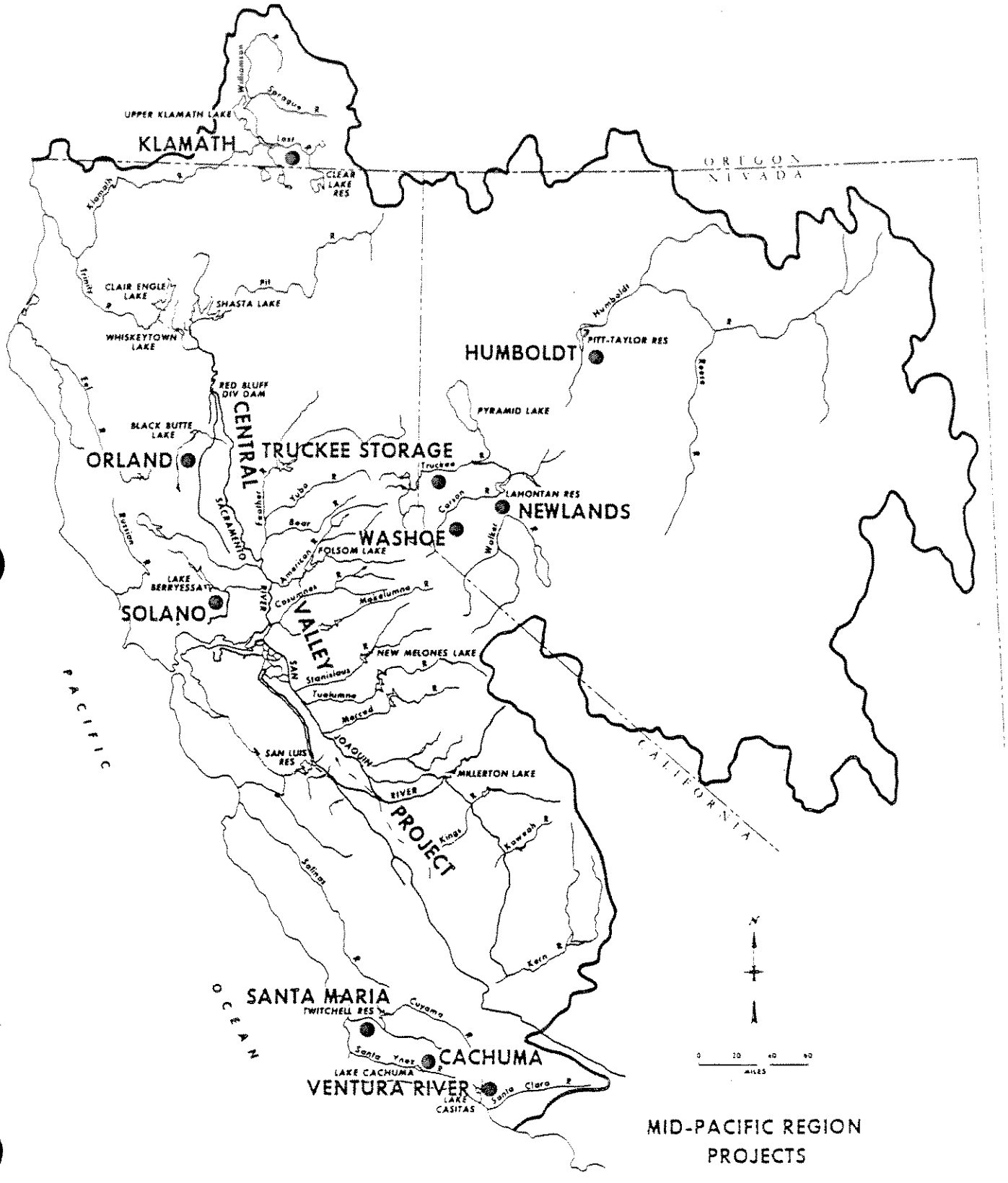
Water supply deficiencies of up to 50 percent were declared by the Bureau of Reclamation today for Central Valley Project water users. This initial water allotment by the Bureau comes on the heels of continued poor precipitation and snowpack and limited reservoir storage. Additional forecasts are scheduled for March, April, and May.

BACKGROUND

The outlook for CVP water supply continues to be poor. With over 60 percent of the precipitation season completed, dry conditions experienced for the last 3 years continue into 1990. Even though reservoir storage is slightly higher than a year ago, water supply is forecasted to be lower since 1990 run-off conditions are expected to be less than that forecasted a year ago. The impact of several storms since mid-January has been insufficient to significantly improve the Bureau's water supply outlook.

FORECAST

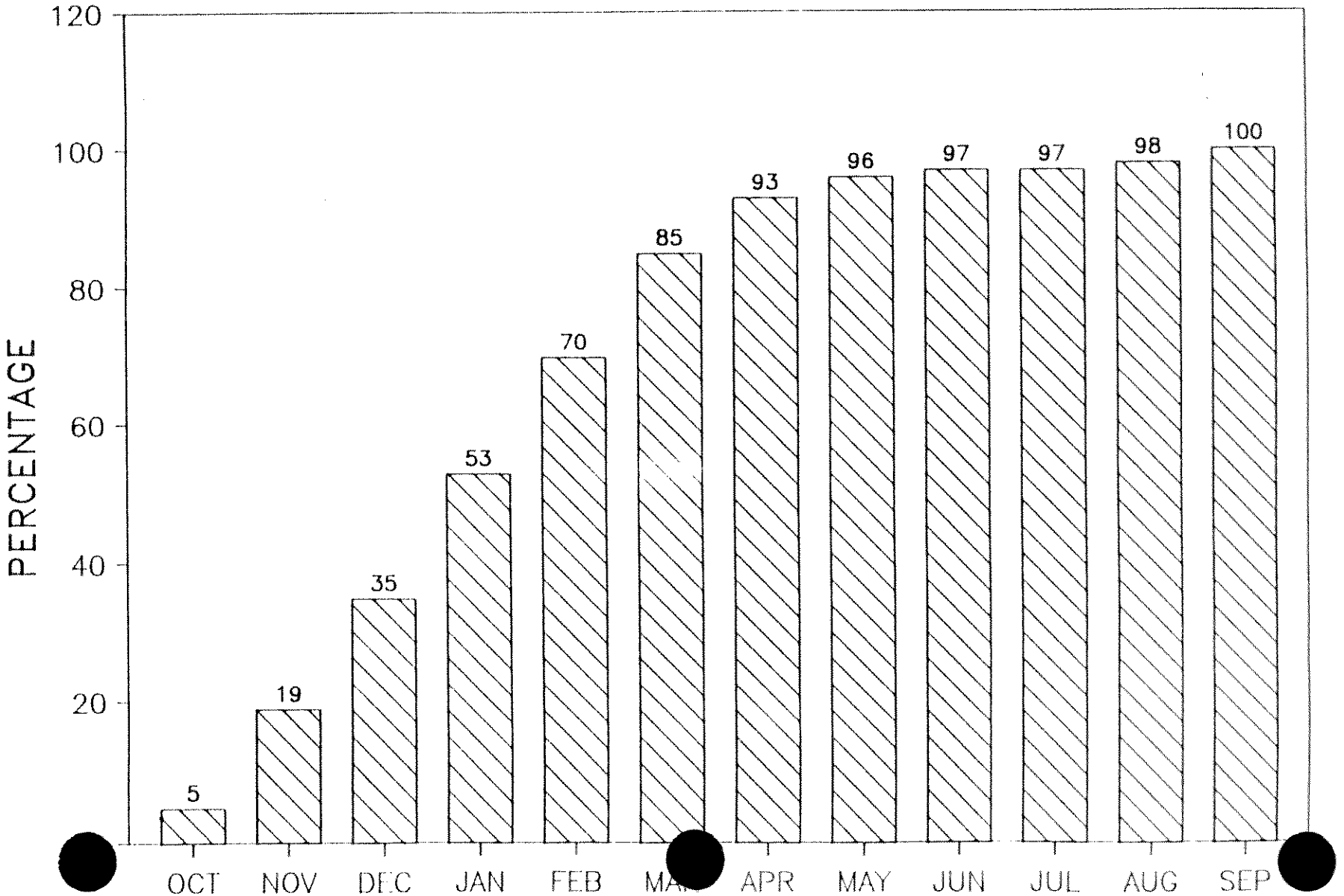
The current and forecasted runoff conditions and storage amounts preclude full contact water deliveries. Thus, the Bureau forecasts 50 percent supply for agricultural contractors, 75 percent supply for Sacramento River water rights holders and San Joaquin River exchange contractors, and either 75 percent or 50 percent supply to municipal and industrial water contractors as provided in their individual contracts with the Bureau. To accommodate these forecasted supplies, total CVP storage is forecasted to be decreased by about 2 million acre-feet and be at 3.1 million acre-feet on September 30.



MID-PACIFIC REGION
PROJECTS

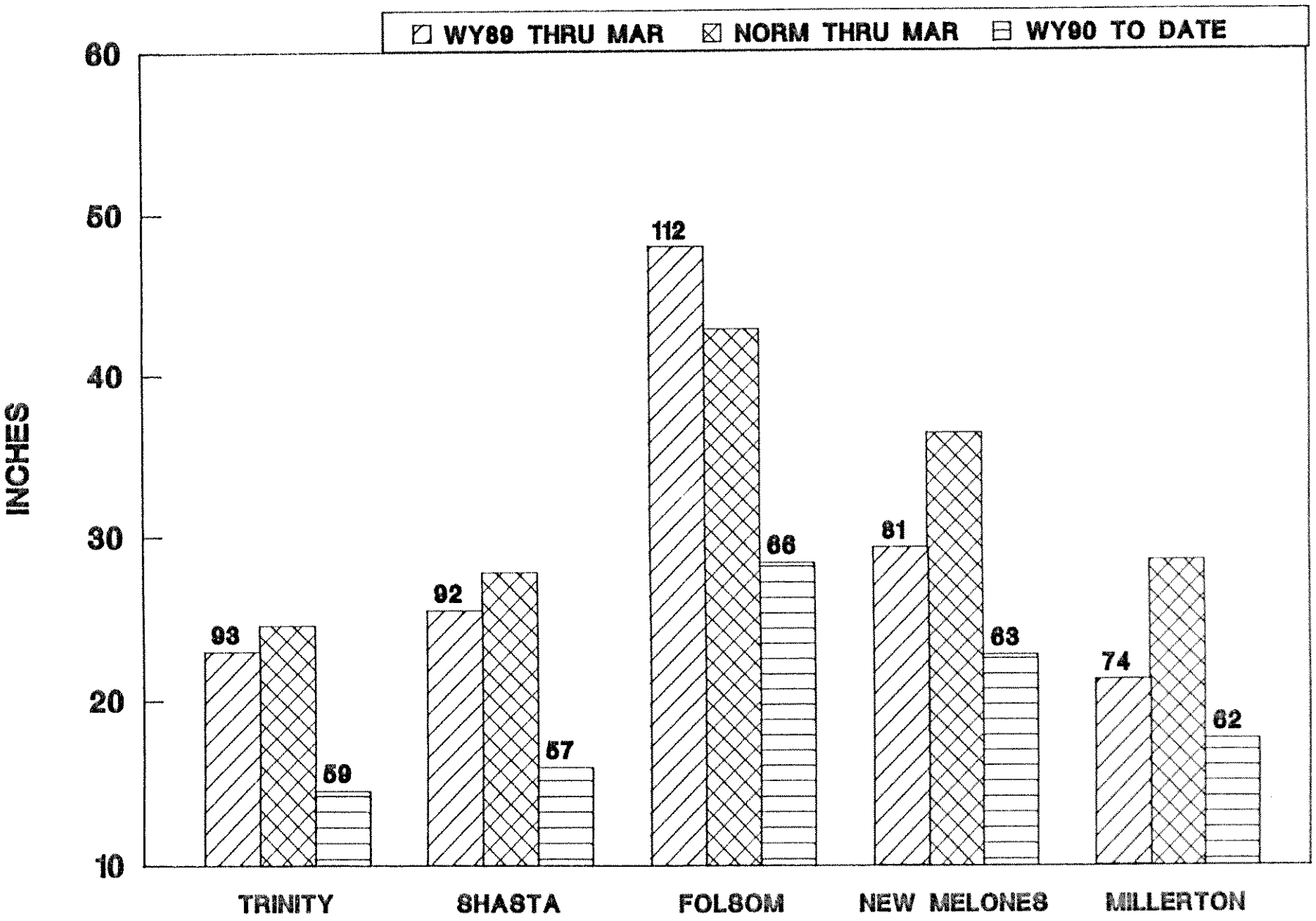
TYPICAL PATTERN OF PRECIP ACCUMULATION

CENTRAL VALLEY – CALIFORNIA



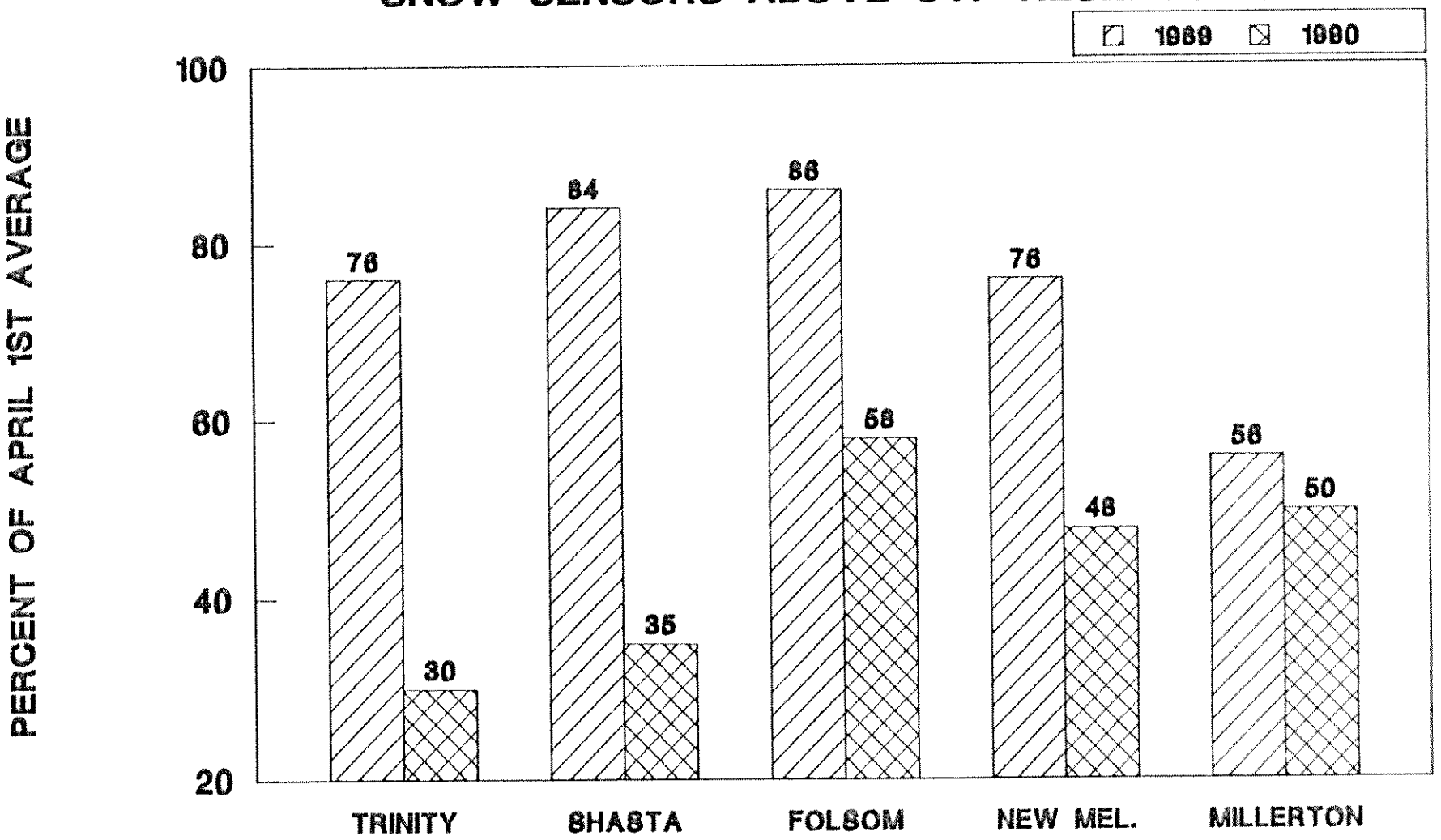
PRECIPITATION ABOVE CVP RESERVOIRS

3/29/1990

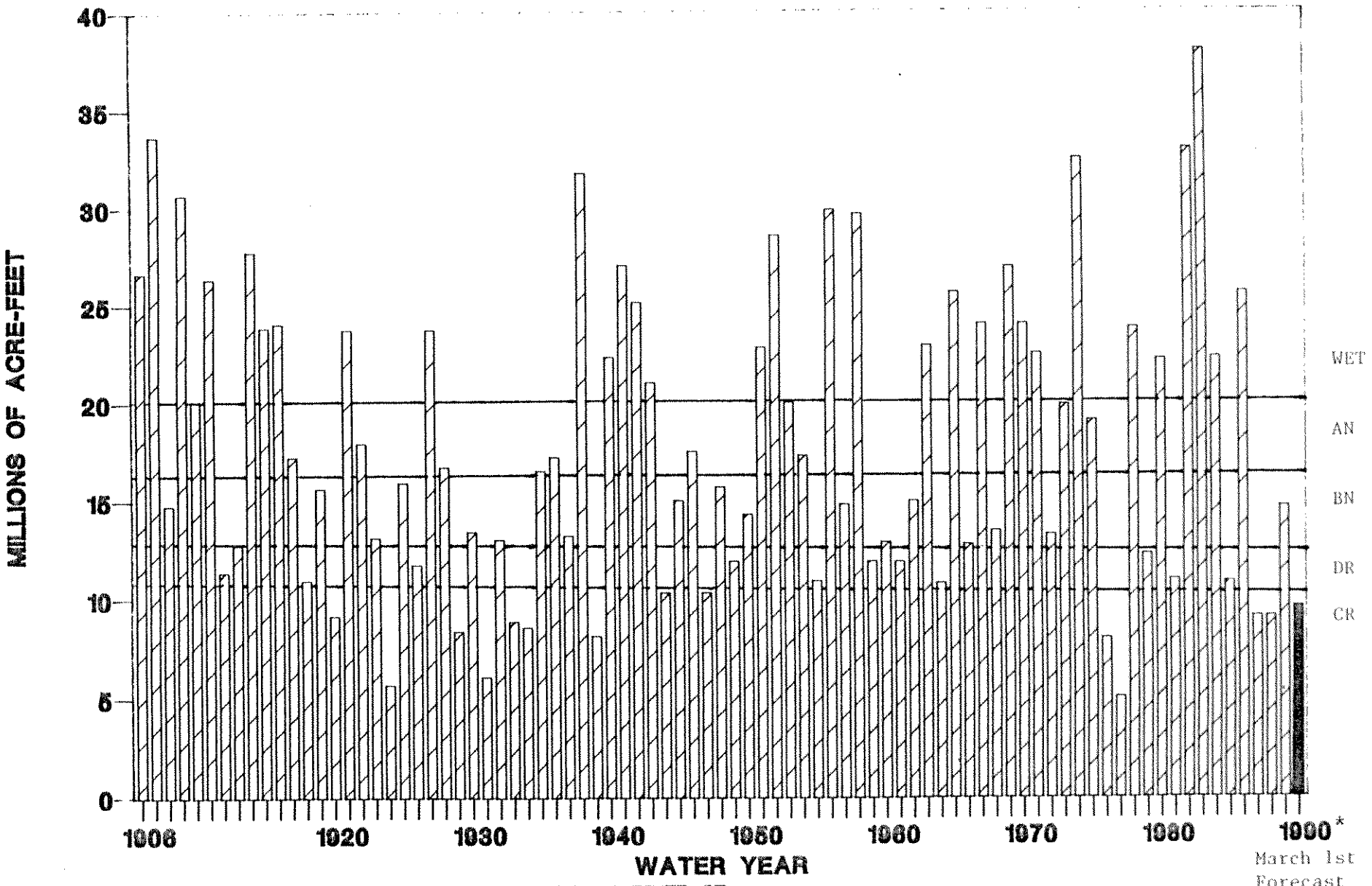


BASIN SNOWPACK AS OF MAR 27

SNOW SENSORS ABOVE CVP RESERVOIRS



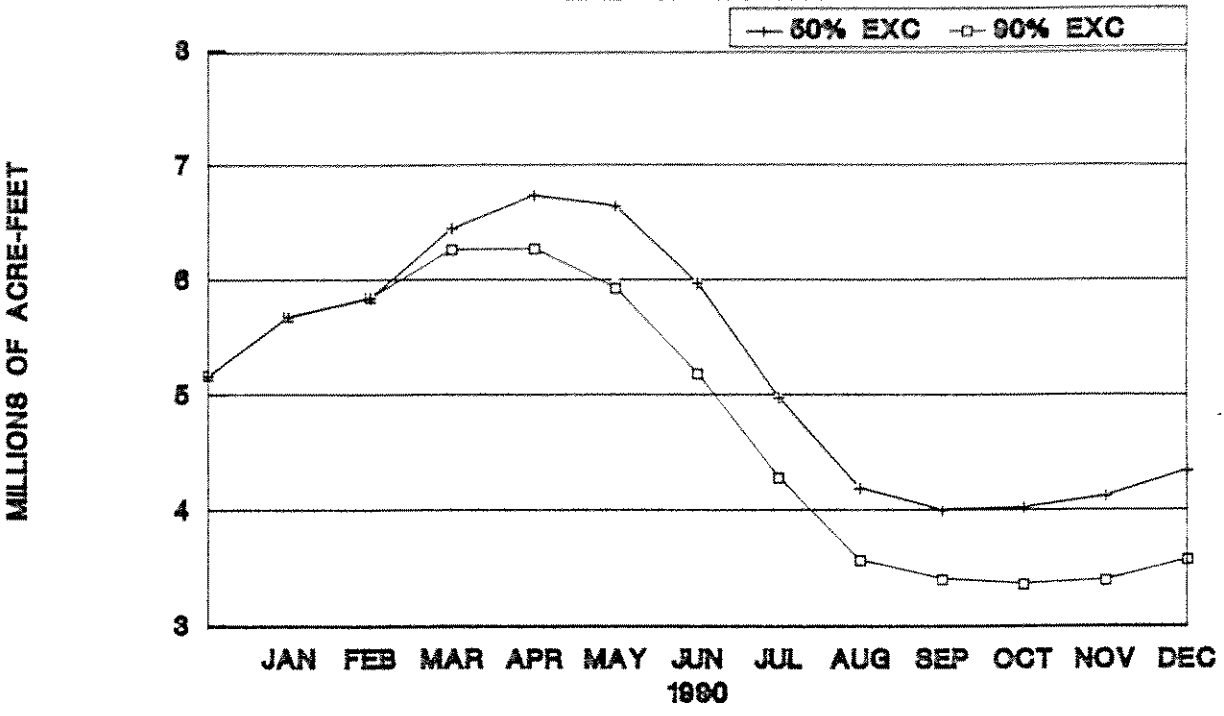
* SACRAMENTO RIVER INDEX



* UNIMPAIRED RUNOFF FROM THE SACRAMENTO RIVER AT BEND BRIDGE, FEATHER RIVER INFLOW TO OROVILLE, YUBA RIVER AT SMARTSVILLE, AND AMERICAN RIVER INFLOW TO FOLSOM.

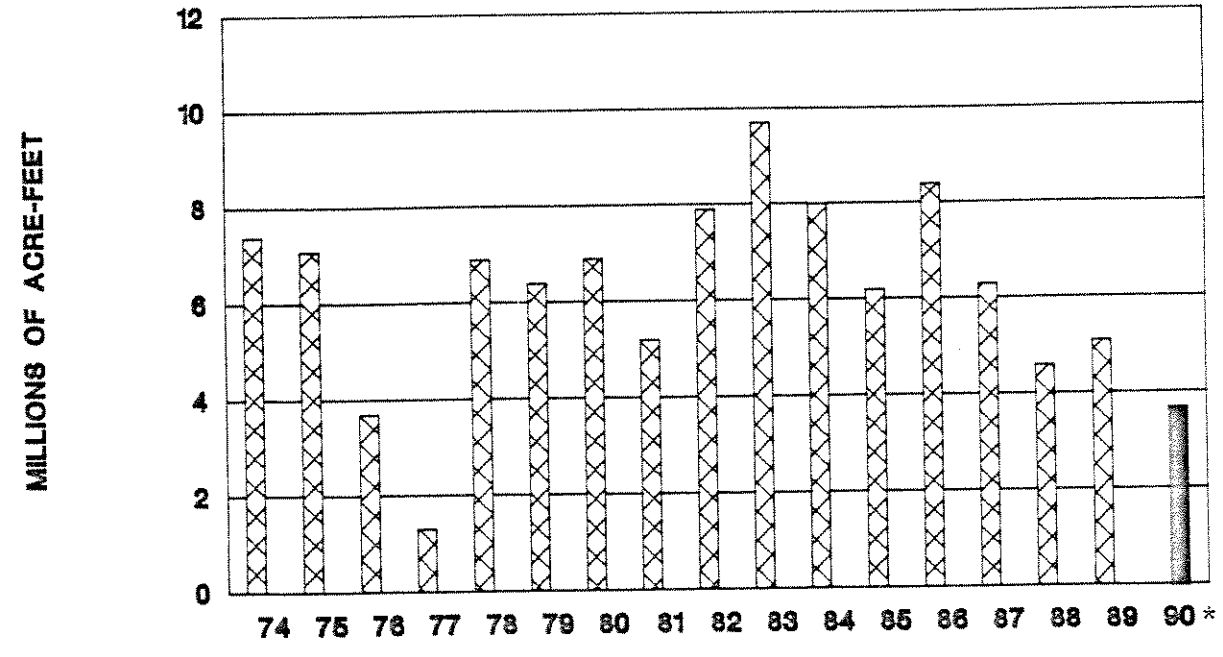
CVP RESERVOIR STORAGE

END-OF-MONTH



CVP CARRYOVER STORAGE

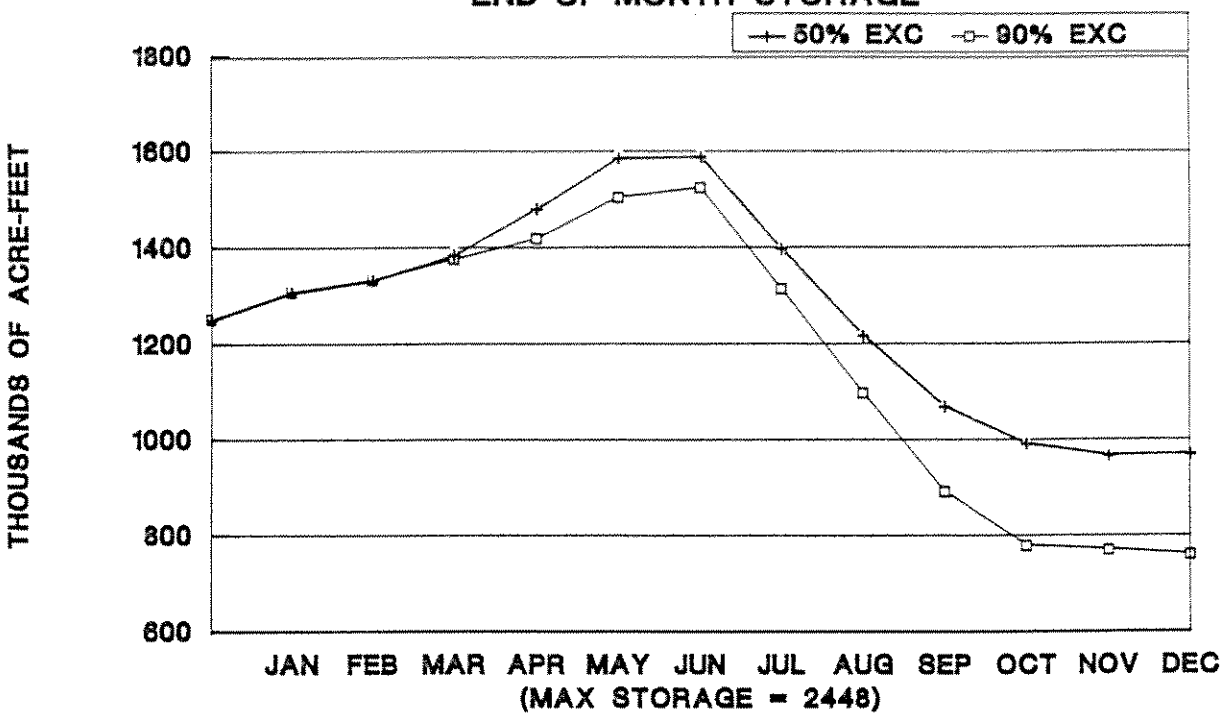
SEPTEMBER 30



*Projected Carryover

FIGURE 3.

CLAIR ENGLE RESERVOIR



LEWISTON DAM

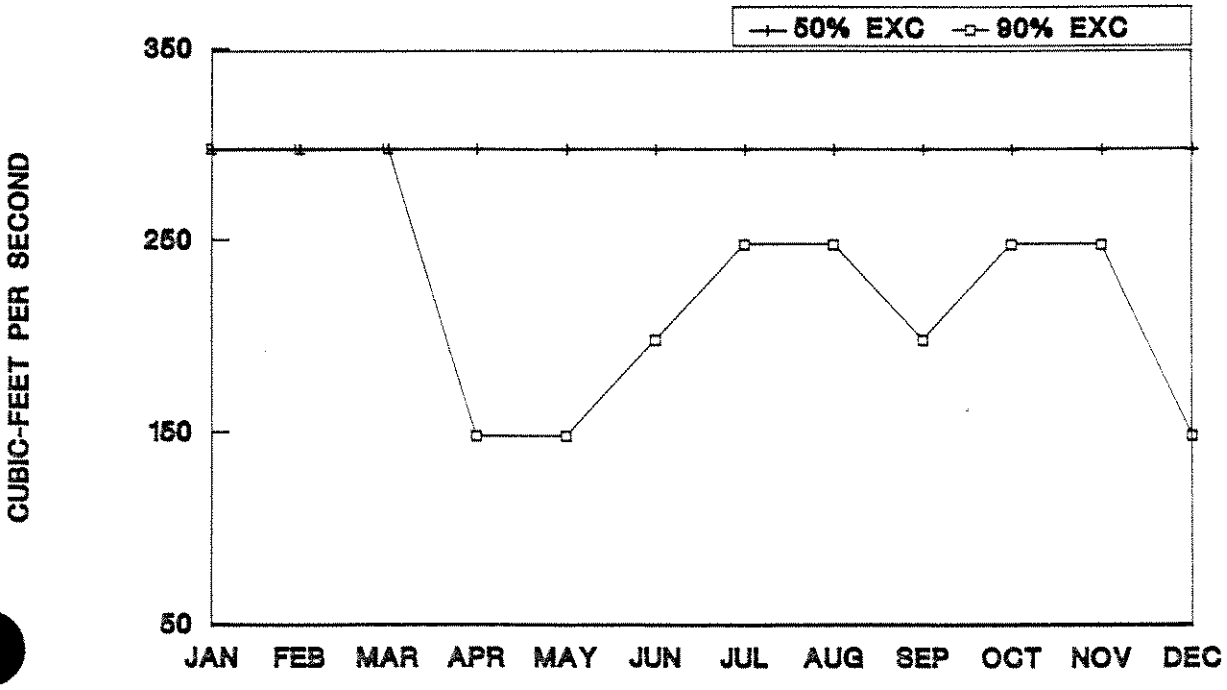
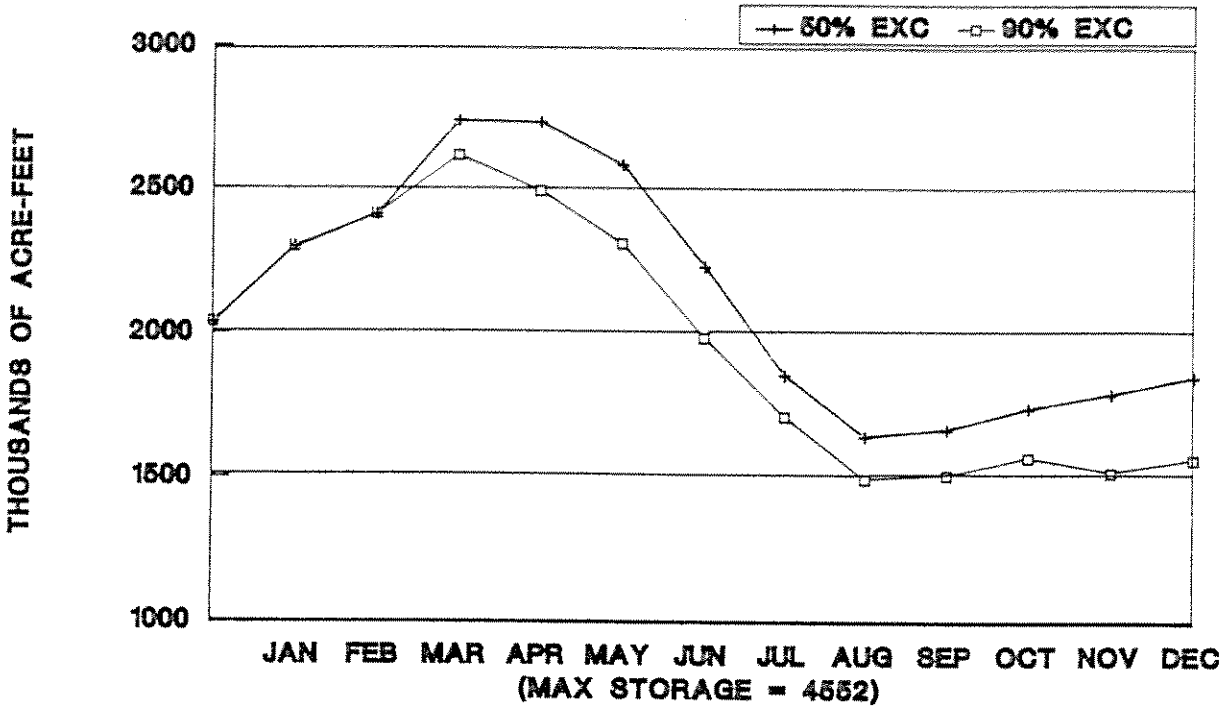


FIGURE 5.a.

SHASTA RESERVOIR

END-OF-MONTH STORAGE



KESWICK DAM

MONTHLY AVERAGE RIVER RELEASE

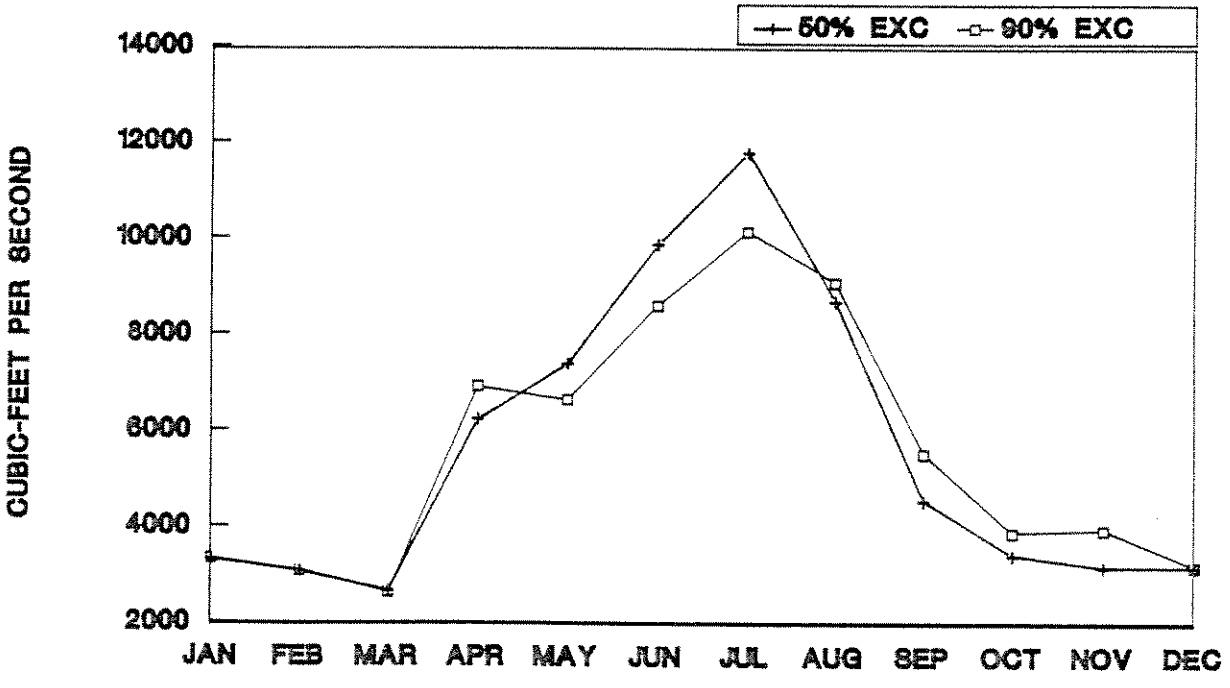
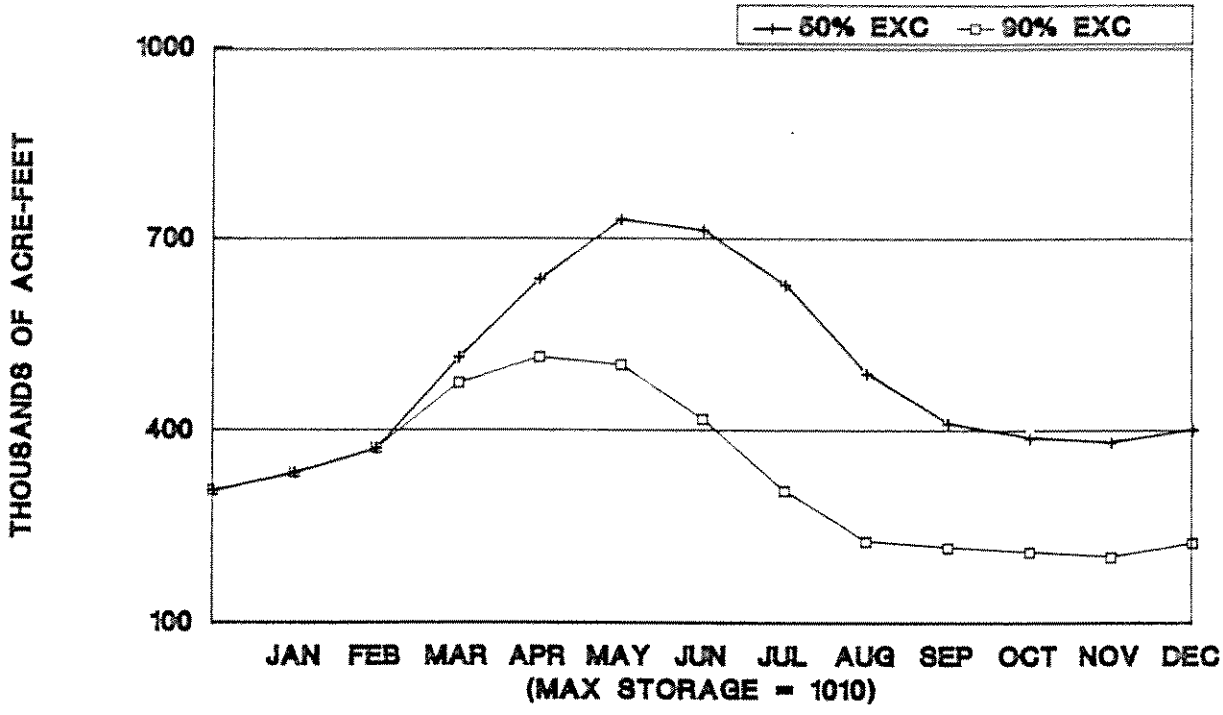


FIGURE 5.b.

FOLSOM RESERVOIR

END-OF-MONTH STORAGE



NIMBUS DAM

MONTHLY AVERAGE RIVER RELEASE

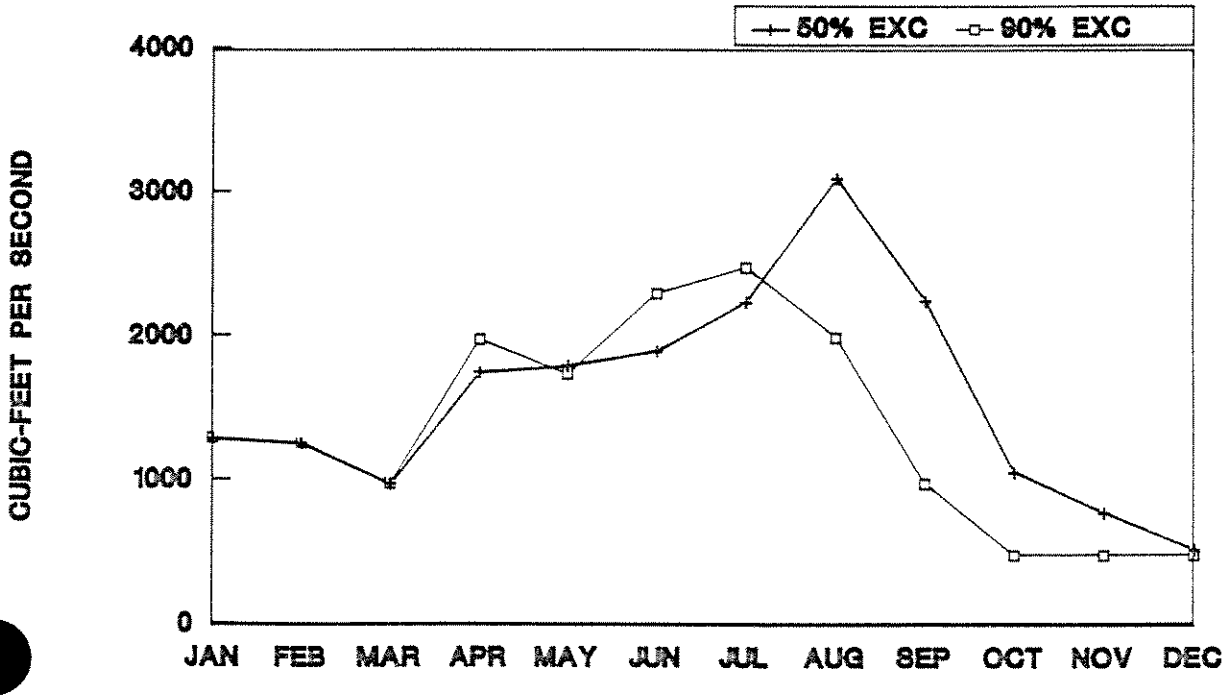
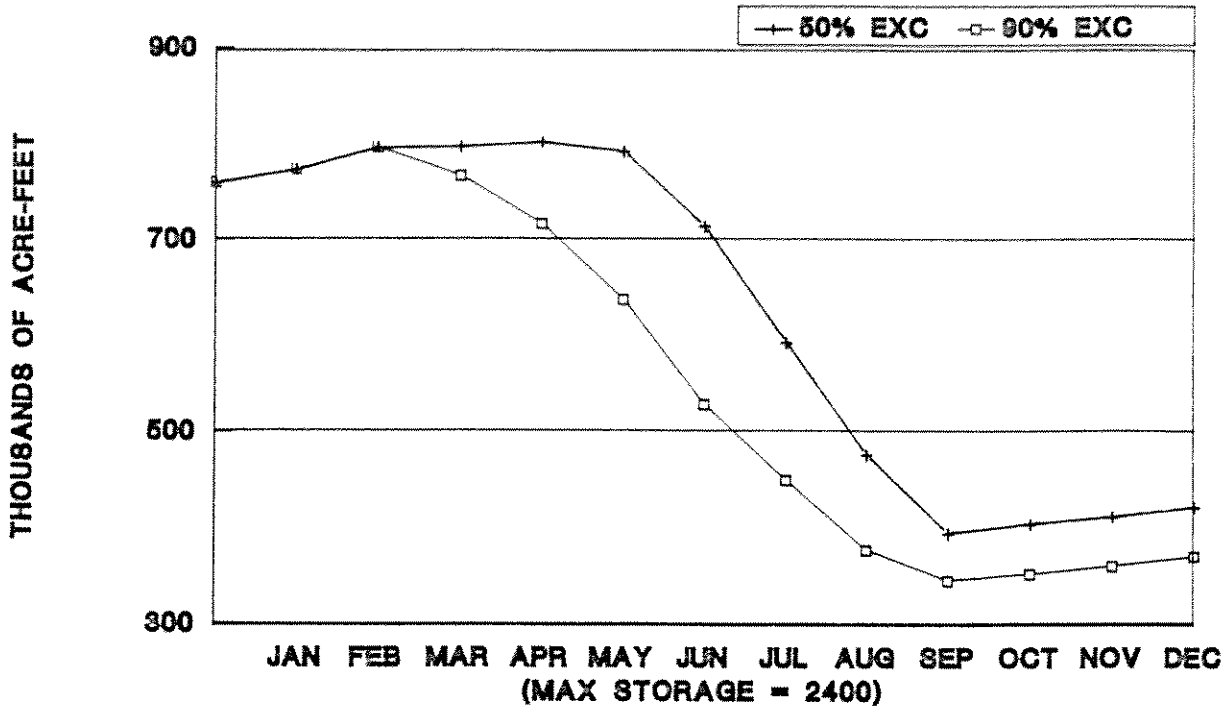


FIGURE 5.c.

NEW MELONES RESERVOIR

END-OF-MONTH STORAGE



GOODWIN DAM

MONTHLY AVERAGE RIVER RELEASE

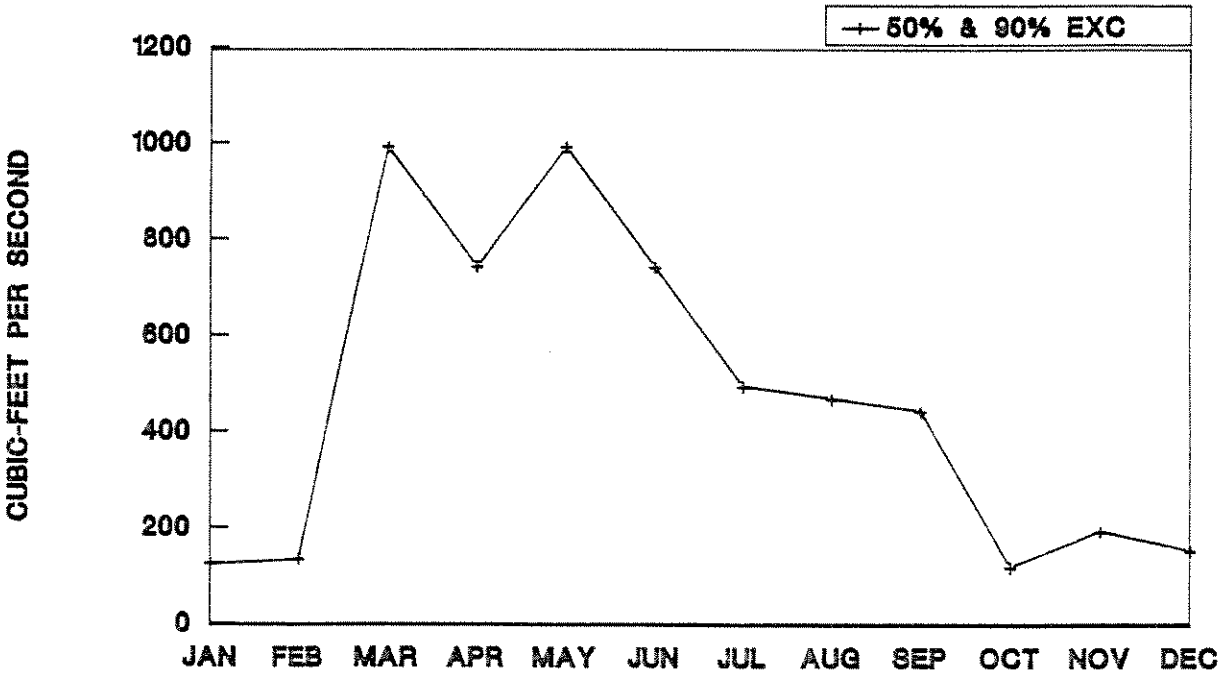
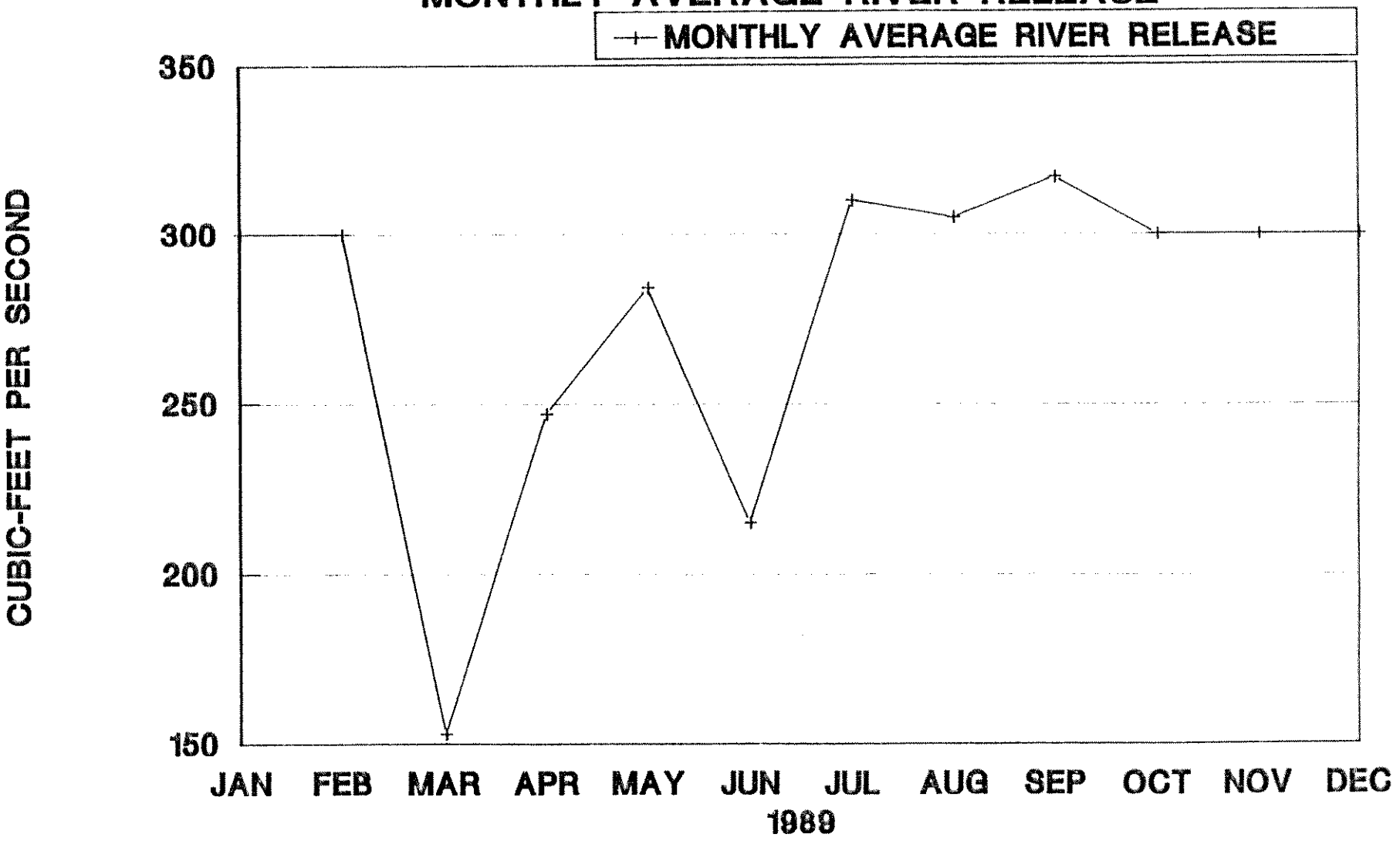


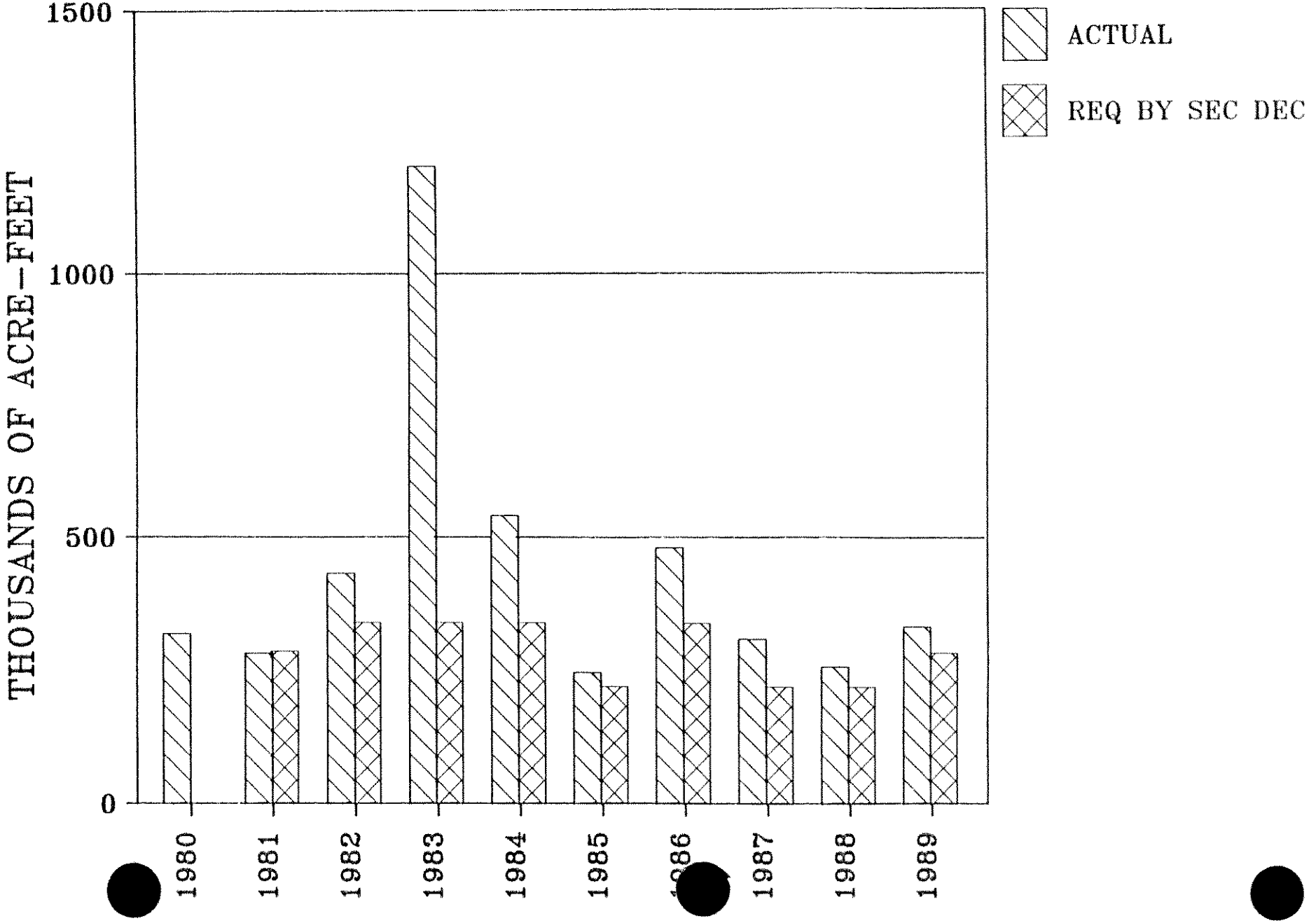
FIGURE 5.d.

LEWISTON DAM

MONTHLY AVERAGE RIVER RELEASE



TRINITY RIVER FISHERY RELEASES



United States Department of the Interior

FISH AND WILDLIFE SERVICE

ATTACHMENT 5

Fish and Wildlife Enhancement
Sacramento Field Office
2800 Cottage Way, Rm. E-1803
Sacramento, California 95825

March 30, 1990

MEMORANDUM

TO : Regional Director, Mid-Pacific Region, Bureau of Reclamation, Sacramento, CA (Attn: MP-2800)

FROM : Field Supervisor, Fish and Wildlife Service, Fish and Wildlife Enhancement, Sacramento, CA

SUBJECT: Trinity River Fishery Flow Needs April 1, 1990 through March 31, 1991

As we agreed in our meeting of March 13, 1990 we are submitting the required Trinity River fishery flow release schedule for the water year beginning April 1, 1990 and ending on March 31, 1991 (attachment 1). The flow is based primarily on the fishery needs of the Trinity. The total volume of water required is 340,283 acre-feet. This schedule has been coordinated with the California Department of Fish and Game, the Trinity River Restoration Program, and the Hoopa Valley Tribe.

Consistent with the position we held last year and earlier this year, we feel strongly that the 340,283 acre-foot release is critical, regardless of water year classification under the 1981 Secretarial Decision (SID). The impact of reduced flows to the Trinity River (memorandum of March 14, 1990 from the Chief, Central Valley Operations Coordinating Office to this office) are discussed in 2 parts: 1) the impacts to the Trinity River fish population; and, 2) impacts to completion of the Trinity River Flow Evaluation Program and the Trinity River Restoration Program.

1) Impacts to Trinity River fish population.

In 1980 the Service recommended a fishery flow release of 340,000 acre-feet in all water years. A relative habitat value of 1.0 was associated with this level of release. However, preliminary findings of the 12 year Trinity River Flow Evaluation suggest that this estimate may have been overly optimistic. Preliminary findings of the Trinity River Flow Evaluation Program suggest that flows of 340,000 acre-feet annually may only provide about 55 percent of salmon and steelhead habitat necessary to achieve full restoration goals.

The 140,000 acre-foot volume of water available under a critical dry water year classification, represents, at best, a 73 percent

reduction in available salmon and steelhead habitat on the Trinity River. This represents a hardship which may take years to overcome. If further studies confirm our preliminary findings this reduced flow could represent as much as an 85 percent reduction in salmon and steelhead habitat.

Expected biological impacts, or areas of concern, if the volume of water available to the Trinity is limited to less than 340,000 acre-feet are:

1. Reduced holding habitat and increased pre-spawning mortality of spring-run chinook salmon due to elevated water temperatures and reduced holding area.

2. Reduced rearing of naturally produced salmon and steelhead juveniles within the mainstem.

3. Reduced habitat quality for rearing salmon and steelhead because of elevated mainstem river water temperatures, particularly above the North Fork.

4. Reduced habitat availability because of riparian encroachment, the result of limited and controlled streamflows.

5. Reduced success of salmon and steelhead smolt survival due to suppressed emigration because of reduced flows, increased predation by birds and other fish, and incidental harvest by anglers.

6. Reduced available habitat area for adult spawning therefore increasing superimposition of spawning redds.

7. Devastation of side-channel habitat areas.

8. Continued decline of already degraded habitat conditions, the result of recent multiple and consecutive dry water years.

9. Exacerbated affects of harvest allocation on spawning escapement causing a further decline in fish production of the Trinity River.

Table 1 illustrates expected impacts of flow reductions in terms of their relative habitat value. The basic assumptions used to generate these estimates are those described in the 1980 EIS on Mitigation Flows for the Trinity River (FWS 1980). As mentioned, if preliminary findings are confirmed, relative habitat values and habitat impacts could be even greater.

Table 1. Estimated reduction in relative habitat value expected for reduced flows on the Trinity River.

Annual Release (Acre-feet)	Relative Habitat Value	Reduction
340,000	100%	0%
300,000	85%	15%
287,000	81%	19%
220,000	56%	44%
140,000	27%	73%

2. Impacts to the Trinity River Flow Evaluation and the Trinity River Restoration Program.

Since 1985 the Trinity River Flow Evaluation has been able to adjust to, and take advantage of, reduced river flows imposed as a result of water year classifications under criteria established in the 1981 SID. This has occurred in 4 of the past 5 years. If a limited fishery flow release of 140,000 acre-feet for the Trinity is implemented this year, an early objective of the Flow Evaluation program, **to establish baseline habitat conditions** so that a running tally of habitat conditions and an accounting for habitat changes resulting from increased flows and watershed restoration over the course of the 12 year evaluation period, can not be met.

With only 5 field seasons remaining in the evaluation program, the objective of monitoring habitat change over time can not be met, as perceived in the 1983 Plan of Study. Limited success in this objective may yet be achieved should the flows required for 1990 (attachment 1) be provided.

Concerns of the Trinity River Restoration Program (TRRP) are expressed in attachments 2 and 3. To summarize briefly, the TRRP is depending on the flow evaluation team to fully describe the habitat vs flow relationship, something which can not be done without flows as described in attachment 1. This is necessary in order to develop a habitat improvement plan and is a critical concern because they are under a congressional mandate, PL98-541, to complete an effective restoration program by the end of FY-1995. Without a complete understanding of the flow vs habitat relationship, the TRRP can not develop a plan in time to fully evaluate it and implement it by 1995.

Additional concerns expressed by the Trinity River Field Office, resulting from postponing the 340,000 acre-foot fishery release, are:

1. Limited ability to estimate long-term costs of restoration activities and O&M needs for the mainstem.

2. Limited ability to determine the feasibility of habitat improvement measures.

3. Delayed assessment of the relative merits of removing fine sand and other sediment material with flushing flows or by mechanical means.

4. Delay in the design, evaluation, and implementation of an adequate sediment removal program. The result would be the inability to complete implementation by the end of the restoration program (i.e. 1995).

5. Delay in the quantification of downstream movement of juvenile salmon and steelhead. This is viewed as a critical element in the determination of the overall production of the Trinity River and therefore the success of both the restoration program and the evaluation of the affects of increased flows resulting from the 1981 SID.

6. Interruption in the planned continued evaluation of early restoration activities (i.e. side channel habitat construction). This information is considered necessary in estimating the total mainstem habitat that can be derived from such activities.

As indicated in the previous discussion significant impacts to the fishery, the Trinity River Flow Evaluation, and the Trinity River Restoration Program are anticipated if the 140,000 acre-foot volume of water is all that is available for Trinity River fishery releases in 1990. Impacts to the fishery are potentially devastating (i.e. a 73 to 85 percent reduction in available habitat along with implied reductions in fishery production). Recovery from such impacts are expected to take years. Although the Trinity River Flow Evaluation Program could continue, significant deficiencies are expected in meeting the goals and objectives specified in the 1983 Plan of Study. Efforts to amend the Plan of Study and the 1981 SID would need to begin immediately. Impacts to the Trinity River Restoration Program are potentially even more devastating. Successful completion of the program is severely in doubt. Certainly, the continued drought has brought significant hardships to the Trinity River fishery and potentially insurmountable hardships to the Trinity River Flow Evaluation and the Trinity River Restoration Program.

Under the current understanding of the 1981 SID, as described in the March 14, 1990 memorandum from the Chief, Central Valley Operations Coordinating Office, 140,000 acre-feet of water may be all that is available for Trinity River fishery flow releases, if the critical dry water year classification persists. Therefore, releases from Lewiston Dam for the month of April should be as follows: 300 cfs April 1 through April 15; 500 cfs April 16 through April 30, 1990. Upon written notification of the April forecast we will notify you of Lewiston Dam releases for the month of May. Accordingly, a Trinity River fishery flow schedule for the remainder of the water year (June 1, 1990 through March 31, 1991) will be provided to you upon written notification of the May forecast.

We intend to work closely with your office, the Trinity River Technical Coordinating Committee, the Trinity River Restoration Program, the California Department of Fish and Game, the Hoopa Valley Tribe, and other cooperating agencies to judiciously schedule fishery releases.

Any questions regarding this memorandum should be directed to either myself or Mr. Michael Aceituno at this office (phone (916)978-4613).

Wayne S. White
Field Supervisor

Attachments

cc: ARD, FWS(FWE), Portland, OR
ARD, FWS(FR), Portland, OR
Director, California Department of Fish and Game, Sacramento, CA
Project Coordinator, Trinity River Restoration Program, Weaverville, CA
Hoopa Valley Tribe, Hoopa, CA (ATTN: Steve Suagee)
Chairman, Trinity River Technical Coordinating Committee, Weaverville, CA
FWS(FWE), Lewiston Suboffice, Lewiston, CA

Attachment 1
to ATTACHMENT 5

TRINITY RIVER FLOW NEEDS - 1990
(April 1, 1990 through March 31, 1991)

April 1 - 15	300 cfs	
April 16 - May 12	500 cfs	Natural Chinook Emigration Flow
May 13 - 25	3,000 cfs	High Study Flow, available habitat, sediment transport
May 26 - June 4	1,500 cfs	Middle Study Flow, available habitat, sediment transport
June 5 - June 11	1,000 cfs	Side-channel habitat study flow
June 12 - October 14	300 cfs	Low study flow, available habitat, summer water temperatures
October 15 - November 30	400 cfs	Salmon spawning enhancement flow
December 1 - March 31	300 cfs	egg incubation, steelhead spawning
TOTAL:	340,283	Acre-Feet

ATTACHMENT 2
to ATTACHMENT 5

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE

TRINITY RIVER BASIN FIELD OFFICE
P.O. Box 1450
Weaverville, CA 96093
(916) 623-3931

TRB-400

MAR 28 1990

Memorandum

To: Field Supervisor, Fish and Wildlife Enhancement, Sacramento, CA
Attention: Mike Aceituno

From: Project Coordinator, Trinity River Field Office, Weaverville, CA

Subject: Trinity River Fishery Flow Schedule for 1990-1991 (Your Memo of March 6, 1990)

Our position that it is critical to receive the 340,000 acre-feet of fishery water for 1990-91 is predicated upon the congressional mandate under PL98-541 to complete an effective restoration program by the end of FY-95. We are now in the fifth year of the program and have yet to develop a fish habitat improvement plan for the mainstem. We have yet to have the opportunity to determine the habitat versus flow relationships at high enough releases to exceed the reduced capacity of the upper river channel. Expansion of mainstem habitat has clearly been identified as a crucial element to increasing anadromous fish production. The recommended releases are imparative to obtaining the data needed to develop the plan. Even with acquisition of the required data this year the challenge to design and implement the plan in time to measure biological responses by September 30, 1995 is great. Further, we do not feel it prudent to assume either that Congress will provide funding for restoration beyond FY-95 or that Mother Nature will provide drought relief next year. There is reasonable probability that drought conditions will persist for several years making it increasing difficult to provide required restoration flows.

In addition to the general situation described above there are more specific reasons why the required information should be collected this year. The Bureau of Reclamation has estimated that approximately $14 million of restoration construction and rehabilitation funds will remain starting in FY-92. It is imperative that a cost estimate for the mainstem plan be generated in FY-90 and early FY-91 so that the remaining funds can be effectively and efficiently allocated to the highest priority objectives. The data to be collected under items A1 through A5 of our March 23, 1990 memo are necessary to formulate an adequate mainstem plan. Concurrently cost estimates will be prepared for the other key restoration activities so that funding priorities can be established. The will be more potential cost efficiency in the $6 million FY-91 budget.

Another related aspect is that our cooperating entities (those that will be responsible for maintaining restoration benefits) have blended restoration funds into their management programs and require an accurate consistent estimate of available funds for the remaining years of the program. Failure

to carry out the cost estimate/funding priority assessment will impose management difficulties on these entities that will be detrimental to achieving successful restoration and conducive to inefficient utilization of limited funds.

Here are responses to your questions:

1) We contend that the mainstem portion of the program cannot be completed effectively and efficiently by the end of FY-95 unless the 3000 cfs release is made available this year. The overall program can continue but with much less probability of success. Given that funds are limited and that drought conditions could well persist the adverse impacts of not receiving adequate flows are irreversible and irretrievable.

2) Data from the 3000 release is required to develop and implement the habitat improvement plan which includes the element of O & M. Given the premises that time and funds are limited, the loss of effectiveness and efficiency of the program cannot be recovered.

3) The only way we know to productively assess the merits of flushing flows is to receive some. We view the 3000 cfs level as a minimum first step in the evaluation process. A higher flow would be better. Again, given the constraints described above failure to obtain a flushing flow would result in irretrievable adverse program impacts.

Until the value of flushing flows are assessed it is premature to utilize limited funds to remove small amounts of the hundreds of thousands of tons of sand and other sediments deposited in the mainstem channel. In the interest of efficiency we are opposed to initiating expanded sediment removal program at this time. Currently dredging of additional holding pools for fish is not deemed necessary.

4) A critical element in the overall restoration program is establishing a system to measure whether or not the habitat improvements have resulted in an increased number of smolts. We now have this evaluation tool in place with rotary traps near Junction City and Willow Creek. Again, given the limited time and funding available, it is imperative that the effectiveness of higher flows in moving emigrants from the hatchery and from natural conditions through the mainstem be assessed as quickly as possible.

Some outmigration data at lower flows is available but no data is available evaluating higher flows. For our purposes we view the expected adverse impacts of not receiving adequate high flows as irretrievable.

5) The above discussion should sufficiently document the permanent adverse effects failure to receive the recommended flows would have on the restoration program. One last item to consider is that the wise expenditure of about $24 million in restoration funds ($14 million C & E and $10 million O & M) are at stake. In addition thousands of dollars of cooperating entity funds are being committed to supplement Federal monies. Further, the Trinity River Restoration Program is the pilot after which the Klamath River and Sacramento River restoration efforts are being patterned. Thus our failure to produce a high level of success may well adversely impact those projects.

We appreciate your support in this matter. In consideration of the severe drought conditions we are willing to work with you, the Bureau of Reclamation and other cooperating entities to make judicious reductions in the recommended fisheries releases. Also, we need to begin seeking revision of the 1981 SID since it appears that Mother Nature is not going to cooperate.

Chuck Lowe

cc: Paul Hubbell, California Department of Fish and Game, Sacramento, CA
Steve Suagee, Hoopa Valley Tribe, Hoopa, CA
Associate Manager, Fisheries - CA, NV, W.WA, Portland, OR
Project Manager, Bureau of Reclamation, Weaverville, CA

ATTACHMENT 3
to ATTACHMENT 5

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
TRINITY RIVER BASIN FIELD OFFICE
P.O. Box 1450
Weaverville, CA 96093
(916) 623-3931

MAR 2 3 1990

TRB-400

MEMORANDUM

TO : Field Supervisor, Fish and Wildlife Enhancement, Sacramento, CA
Attention: Mike Aceituno

FROM : Project Coordinator, Trinity River Field Office, Weaverville, CA

SUBJECT : Trinity River Fishery Flow Schedule, 1990-1991 (Your Memo of March 19, 1990

Consistent with the position we held last year and earlier this year, we feel strongly that the 340,000 acre-feet of water initially request must be provided regardless of the classification under the 1981 SID. We believe this position is harmony with CDFG, the Hoopa Valley Tribe, and the majority of the Trinity River Technical Coordinating Committee. As per your request, we are documenting the impacts of not receiving adequate water this year.

The documentation is in 2 parts: A) Impacts to completion of the restoration program in a timely (by end of FY-95), effective and efficient manner; and B) Impacts to fish population. We are concentrating our effort on part A because we are confident that the flow evaluation team has intimate knowledge of part B based upon their 5 years of study.

A1. <u>FLOW EVALUATION</u>

The flow evaluation program is a critical component of the overall restoration effort. It is critical that the 3000 cfs component of the recommended release schedule be provided. We are depending upon the flow evaluation team to improve the flow vs habitat model this year so that an adequate mainstem habitat improvement plan can be designed, evaluated, presented to the public, and implemented by the end of FY-95, the last year of the restoration program. We envision that it will take a year to conduct planning and design work and 6 months to a year to assess feasibility, resolve logistical issues such as access, environmental impacts etc., and initiate construction. Construction will take 3 or 4 seasons to complete. Postponing the 3000 cfs flow year will also significantly increase the chances of spending money unwisely and/or inefficiently.

Expansion of the flow vs habitat model will facilitate sufficiently accurate estimates of existing habitat in the mainstem and the pilot side-channels at flows of 3000 cfs and downward. Using this baseline information, we will generate an acceptable estimate of how much side-channel habitat is needed to achieve restoration fish production goals. Side-channels have been demonstrated to provide rearing habitat which is the primary limiting factor in the mainstem. The above data will be combined with the results of a side-channel survey to be conducted this summer to estimate the total cost of the

side-channel program. It is very important to develop this cost estimate so that an adequate fraction of remaining funds can be appropriately allocated and budgeted.

A2. HABITAT MAINTENANCE COST ESTIMATES

During the 3000 cfs release period the impacts on spawning gravel placed near Lewiston Dam and the structure of the pilot side-channels will be assessed. This information is very important in estimating long term O&M needs for the mainstem and in determining the feasibility of these habitat improvement measures.

A3. SEDIMENT MOVEMENT STUDY

The upper 40 miles or so of the mainstem channel contains thousands of cubic yards of sand and other sediments that clog gravel and fill in pools. A key element of the restoration program is to remove as much of this material as practicable. As soon as possible we need to assess the relative merits of removing the material with flushing flows or mechanically. Use of flows has the attraction of not having to find enough access and disposal sites. A study by the Bureau of Reclamation in 1964 has provided useful information but needs to be supplemented with data collection at higher flows. We have contracted with the USGS to collect appropriate data at the 3000 cfs release. Greater releases may be needed in future years.

We need to conduct the flushing flow assessment in 1990 so that an adequate sediment removal program can be designed, implemented and evaluated by the end of the restoration project. Appropriate cost estimates need to be developed so that budget needs can be accommodated. Also the logistical problems of finding disposal areas, access routes etc. must be dealt with in a timely manner.

In addition, we have Trinity County Grant Program under which several dredging proposals have been submitted. Processing of these proposals has been deferred until after the impacts of the flushing flow can be determined.

A4. OUTMIGRATION STUDIES

We now have rotary outmigrant traps near Junction City and Willow Creek. A release of 500 cfs mid-April to mid-May is required to evaluate the downstream movement of hatchery steelhead. Last year a 300 cfs release was evaluated. We need to determine at what flow the hatchery fish will move out so that predation on natural fish can be minimized.

The 3000 cfs release will be very valuable in allowing us to measure downstream movement of fish to compare with data obtained last year at 2000 cfs. With 2 trapping sites in operation we can make survival estimates. In addition we will cooperate with the Trinity River Hatchery to conduct a comparative outmigration rate study of spring chinook vs fall chinook.

Flows of 1500 cfs and 1000 cfs respectively are needed during the first half of May to facilitate downstream movement of naturally produced smolts and during the first half of June to facilitate outmigration of hatchery produced

It is very important that we continue to evaluate the effectiveness of the trapping system because this system is intended to be the primary method of measuring the success of the restoration effort. An effective evaluation system needs to be in place prior to making large scale habitat changes.

A6. SIDE-CHANNEL HABITAT EVALUATION

It is very important that the habitat value of the pilot side-channels be quantified. Here we require the 1000 cfs period in June to facilitate this assessment. The information obtained will be used in estimating the total mainstem habitat that can be derived from side-channels.

We do not see any way to overcome the program set backs that would result from the failure to provide the recommended flows.

B. IMPACTS TO FISH POPULATION

Potential impacts or areas of concern that need to be addressed if dry or critically dry flow reductions were implemented are as follows:

1. Provide a 300 cfs base flow to maintain fry and juvenile side-channel habitat, minimize temperature problems in the mainstem and side-channels, minimize super-imposition during the spawning season and to enhance spawning distribution (219,000 acre-feet).

2. Provide 500 cfs for six day in early April to facilitate emigration of hatchery produced steelhead, minimize predation and minimize their predation on other salmonid fry (2,400 acre-feet).

3. Provide releases of 500-700 cfs to facilitate hatchery and natural smolt emigration. Such flow would also help to reduce predation.

Chuck Lane

Charles B. Lane

cc: Project Manager, Bureau of Reclamation, Weaverville, CA
Paul Hubbell, CDFG, Sacramento, CA
Associate Manager, Fisheries - CA, NV, W.WA, Portland, OR
Steve Suagee, Hoopa Valley Business Council, Hoopa, CA

ATTACHMENT 6

M E M O R A N D U M

To: Klamath Fishery Management Council

Date: March 28, 1990

From: Klamath River Technical Advisory Team

Subject: Team Assignments and Recommendations

The KRTAT has completed work on various items assigned to us previously and has prioritized items of technical importance for future work. Assignments completed and recommendations are:

A. Monitoring and assessment needs for Klamath Basin spring chinook salmon.

The technical team wishes to express some concerns and recommend actions in regard to fisheries for spring chinook. As pointed out in the USFWS report (Tuss, et.al., 1990), the spring fishery is primarily supported by the Trinity hatchery stock. The natural populations are at very low numbers. In the South Fork Trinity River the 1988 and 1989 counts found only 59 and 7 salmon, respectively. Stocks of spring chinook in various tributaries in the Klamath system are a valuable genetic resource that needs to be maintained and, if possible, enhanced. There is a lack of data on the size and timing of these stocks.

In the long term we recommend that detailed evaluation of in-river and ocean exploitation rates, age composition and refinement of the run-size forecast model developed by Tuss et.al. will continue.

The Team has reviewed the harvest monitoring plan to be carried out this year by the BIA and USFWS, concluding that it will be effective.

In addition to harvest monitoring, a program to identify run timing, population size and factors limiting production of naturally produced spring chinook throughout the basin will be needed in the future to properly manage this resource. Appropriate management agencies should begin investigating these issues as soon as possible.

B. Analysis of Pacific Fishery Management Council (PFMC) options for 1990 ocean salmon fisheries.

The Klamath Ocean Harvest Model (KOHM), calibrated to expected stock abundances and effort patterns for 1990, has been used to evaluate ocean fishery options. KRTAT members assisted the PFMC Salmon Technical Team (STT) in producing impact analyses as described in Attachment 1.

The KMZ sport options that restrict the bag or close two weekdays were analyzed (at low expected catch levels) as having no reduction in overall sport effort or landings. While that is probably true when catch levels are low, those same measures at high catch levels, if they occur, would dampen catch to some degree and would achieve the desired goal for the KMZ sport fishery.

C. Spawning escapement policy options.

Two suggestions for altering the present harvest rate management have been made: 1) consideration of both hatchery and natural stocks, instead of just the natural stock, which may indicate that optimal harvest rates are higher than the present harvest rates, and 2) an escapement ceiling of 70,000 natural spawners, over which half the fish would be allocated to harvest and half to escapement, which could increase catches and reduce overescapement in years of exceptional abundance.

The Team's analysis of the mixed-stock problem suggests that a small increase in harvest rates may increase landings by about 1%, with an accompanying 10% decrease in the hatchery escapement and a 20% decrease in natural escapement. However, both equilibrium and stochastic analyses indicate that in mixed-stock fisheries, managing for the less productive stock is preferable to managing for the more productive stock.

Analysis of the escapement ceiling indicates that, if our current stock-recruit parameters are correct, it may be possible to increase landings by about 2% by implementing the proposed escapement ceiling. Achieving this increase, however, would entail reducing harvest rates by approximately 10% in years when the escapement ceiling is not exceeded, and there would be about a 10% reduction in variability in the spawning stock.

These analyses indicate limited benefits to the proposed escapement policy changes. They were accomplished making assumptions about current hatchery capacity and productivity within the basin. If these factors change, another analysis may be warranted.

A detailed technical report of the Team's findings will be available to the PFMC and STT in the near future if these options are carried forward.

Items the Team consider important for review in the coming year, and within our ability to address, are prioritized as follows with expected completion dates:

1. Gill net vulnerability factor for age 3 fall chinook (May, 1990).

2. Analysis of methods to increase hatchery salmon utilization (June, 1990).

3. Analysis of methods to investigate distribution and productivity of hatchery and natural fall chinook (June, 1990).

4. Initial population and exploitation assessment of basin coho populations (August, 1990).

5. Further development of population and exploitation assessment of basin spring chinook populations (November, 1990).

6. Assessment on yield to ocean fisheries from minimum size regulation changes (November 1990).

7. Assessment of inseason management opportunities based on catch-per-unit-of-effort at Fort Bragg in May and June (November 1990).

The Team is also available to comment on the Task Forces' long-range plan as the Council deems appropriate.

Oregon Industry

1990 Proposal

Ocean — Harvest Rate (lower than .40)

4 closed periods outside the KMZ (8 days each)

FB - June, July

CB - July, Aug

KMZ —

5000 May

2 openings in Aug (12 days), concurrently with CB openings, modeled at 50% of historic Aug catch (23,000), but operated seasonally, with perhaps an overall safety cap (30K)

The ~~harvest~~ exploitation rate for the ocean would be modeled at 80% of base period effort levels for Oregon and FB and 90% of base period for SOC. Also effort reduction in August, due to KMZ being open. Other parameters same as team is now doing.

River

The River Commercial Fishery would begin after Sept 9th, and would be designed (by adjusting openings) to target the appropriate number of fish, after adjustment for net vulnerability, etc. However, this would not be a hard quota, but a guideline, with perhaps a safety cap at an appropriate number. (50% over the guideline?)

Exploitation Rate changes per suggested values from Mahr's letter (3/25/90) (Effort vs Abundance relationship)

KLAMATH OCEAN HARVEST MODEL VERSION: 12.1
RUN DATE 3-14-90 TIME: 12:8

EXPLOITATION RATE CHANGE FROM BASE PERIOD: a(.|k)

	FALL	MAY	JUNE	JULY	AUGUST	
NOR	1.00	1.00	1.00	0.80	0.80	
CSB	1.00	1.00	0.90 1.00	0.63	0.63	lower (est .55)
KMZ-T	1.00	1.61		0.41	1.30	
KMZ-S	1.00	1.00	1.00	1.00	1.00	
FTB	1.00	1.00 .80	0.53 .42	0.55 .44	1.00	lower (est .75)
SOC	1.00	1.00 .90	1.12 1.01	1.17 1.05	1.00 .90	

0.40 PFMC FOR PUBLIC REVIEW(25000 KMZ)

KLAMATH ADULT OCEAN LANDINGS	94100
KLAMATH INRIVER HARVEST	28000
KLAMATH SPAWNING ESCAPEMENT	66000
AGE 4 KLAMATH HARVEST RATE	40%

KLAMATH LANDINGS - ESTIMATES: L(i|k)

AGE 3	FALL	MAY	JUNE	JULY	AUGUST	TOTAL
NOR	10	10	180	570	730	1480
CSB	180	1170	2380	5240	10000	18950
KMZ-T	390	520	0	3330	3870	8110
KMZ-S	30	80	1090	3610	1530	6340
FTB	60	3770	4090	9950	3610	21480
SOC	0	3120	8910	6230	980	19240
AGE3 TOT	670	8670	16610	28930	20720	75600
AGE 4	FALL	MAY	JUNE	JULY	AUGUST	TOTAL
NOR	120	80	30	170	110	510
CSB	180	790	610	1800	810	4190
KMZ-T	540	420	0	710	580	2250
KMZ-S	40	30	150	640	310	1170
FTB	6	1488	988	1288	870	4000
SOC	0	860	2120	760	70	3810
AGE4 TOT	880	3640	3890	5360	2250	16020
AGE3+4	1550	12310	20500	34290	22970	91620

CATCH PROJECTIONS BASED ON EXPLOITATION RATE SHIFTS

	FALL	MAY	JUNE	JULY	AUGUST	90 TOT
NOR						
CSB						
KMZ-T	11300	5000	0	10000	14700	29700
KMZ-S	1200	900	7000	10500	4700	23100
FTB						
SOC						
TOTAL						

"Oregon option"

From Bailey/Barocco 4-1-90 p.m.

ATTACHMENT 8

KLAMATH OCEAN HARVEST MODEL VERSION: 12.1

RUN DATE: 4-1-90 TIME: 11:27

EXPLOITATION RATE CHANGE FROM BASE PERIOD: a(.jk)

	FALL	MAY	JUNE	JULY	AUGUST
NOR	1.00	1.00	1.00	0.80	0.80
CSB	1.00	1.00	1.00	0.63	0.55
KMZ-T	1.00	1.61		0.00	2.04
KMZ-S	1.00	1.00	1.00	1.00	1.00
FTB	1.00	0.80	0.42	0.44	0.75
SOC	1.00	0.90	1.01	1.05	0.90

0.40 WITH MODIFIED CAL EFFORT AS PER OREGON

KLAMATH ADULT OCEAN LANDINGS	35600
KLAMATH INRIVER HARVEST	~~28000~~ → 32,000 ±
KLAMATH SPAWNING ESCAPEMENT	69100
AGE 4 KLAMATH HARVEST RATE	36.8%

KLAMATH LANDINGS - ESTIMATES: L(ijk)

AGE 3	FALL	MAY	JUNE	JULY	AUGUST	TOTAL
NOR	10	10	160	590	780	1550
CSB	180	1170	2620	5430	9060	18460
KMZ-T	390	510	0	0	6270	7170
KMZ-S	30	80	1100	3650	1590	6450
FTB	60	3020	3260	8200	2790	17330
SOC	0	2810	8090	5810	920	17630
AGE3 TOT	670	7600	15230	23680	21410	68590
AGE 4	FALL	MAY	JUNE	JULY	AUGUST	TOTAL
NOR	120	80	30	180	120	530
CSB	180	790	680	1890	750	4290
KMZ-T	540	420	0	0	970	1930
KMZ-S	40	30	150	660	330	1210
FTB	0	1170	790	1060	290	3310
SOC	0	770	1940	710	70	3490
AGE4 TOT	880	3260	3590	4500	2530	14760
AGE3+4	1550	10860	18820	28180	23940	83350

CATCH PROJECTIONS BASED ON EXPLOITATION RATE SHIFTS

	FALL	MAY	JUNE	JULY	AUGUST	90 TOT
NOR						
CSB						
KMZ-T	11300	5000	0	0	23000	28000
KMZ-S	1200	900	7000	10500	4700	23100
FTB						
SOC						
TOTAL						

- Barocco "No technical basis" for this model run

- KMZ troll 23,000 in August (quota)

ATTACHMENT 9

HARVEST MANAGEMENT PLAN FOR IN-RIVER ANGLER HARVEST OF SALMON AND STEELHEAD TROUT IN THE KLAMATH RIVER BASIN

I. INTRODUCTION

Two runs of chinook salmon (spring run and fall run), coho salmon, and the summer and winter runs of steelhead trout are the target species managed under this harvest management plan. This fishery is conducted in conformance with California sport fishing regulations as adopted by the California Fish and Game Commission, and published in Title 14, CCR. These regulations define methods of take, open areas and seasons, bag and possession limits, and annual harvest limits. Participation in the sport fishery is open to all properly licensed anglers using approved sport fishing methods and gear.

This plan was prepared by fishery biologists of the California Department of Fish and Game. The plan and attachments are on file at the Department's headquarters at 1416 9th Street, Sacramento, California 95814.

II. ESTABLISHMENT OF SEASONS AND OPEN AREAS,

All streams within the Klamath River system accessible to anadromous salmon and steelhead are managed by the Department primarily for those species, and, secondarily, for other anadromous species. Those streams in the Klamath basin lying upstream of Iron Gate, Lewiston and Dwinnell dams are managed primarily for resident fish species.

Those sport fishing regulations promulgated for anadromous waters in the Klamath system are designed to afford anglers maximum fishing opportunities for salmon and steelhead while at the same time providing needed instream protection to the various freshwater life stages of these species.

To effectively achieve these goals in the Klamath River basin a variety of area and time closures, quotes, and bag, possession, and size limits have been promulgated by the Fish and Game Commission (See Attachment 1).

III. BIOLOGICAL AND TECHNICAL BASIS FOR PLAN

In-river run size, angler harvest, and hatchery and natural spawning escapement figures for fall chinook

salmon populations in the Klamath River basin have been generated annually since 1978 by the Department. Estimates of annual Indian subsistence and commercial gill net harvests on the Hoopa and Yurok Indian reservations have been similarly generated by the Hoopa Tribe and the U.S. Fish and Wildlife Service (See Attachment 2).

Additionally, the Department has coded-wire tagged fractions of the annual production of fall chinook at both Trinity River and Iron Gate hatcheries, beginning in 1977. Through recovery and analysis of such tags, the Department has determined the contributions to the ocean and in-river fisheries and to spawning escapements made by fingerling and yearling fall chinook salmon released from the two facilities.

Data regarding spring chinook and coho salmon and steelhead stocks in the Klamath system are less complete than those for fall chinook. Data for these runs consist, in large part, of information generated by the Department regarding groups of marked fish released from the two basin hatcheries, and of estimates of run size, angler harvest and spawner escapement data for parts of the Klamath River basin system in some, but not all, years since 1977.

Additional data are available from various State and federal agencies. These data describe to varying degrees juvenile and adult distributions and various life history aspects for these stocks.

IV. STOCK STATUS, RUN FORECAST AND HARVEST IMPACTS

For fall chinook salmon, please refer to the Pacific Fishery Management Council, (PFMC), Salmon Technical Team's February 1990 report titled, "Preseason Report I, Stock Abundance Analysis for 1990 Ocean Salmon Fisheries." For spring chinook salmon, please see the report titled, "Klamath-Trinity River Basin Spring Chinook Salmon Stock Evaluation and Run Size Forecast", prepared by the U.S. Fish and Wildlife Service, Fisheries Assistance Office, Arcata, California dated March 1990. These two documents provide comprehensive and up-to-date compilations and analysis of available biological and technical data for Klamath River basin fall and spring chinook stocks.

Data regarding coho salmon and steelhead stocks in the Klamath system are more fragmented, consisting mainly of counts made at the two basin fish hatcheries. Combined

coho salmon and fall steelhead returns to Trinity River and Iron Gate hatcheries during the 1989-90 season amounted to about 40% and 122%, respectively of the 5-year (1984-88) average returns. At present, there are no preseason abundance projections available for Klamath River system coho salmon and steelhead stocks.

V. MANAGEMENT OF THE FISHERY

The sport fishery for chinook and coho salmon is conducted only in those portions of the main stems of the Klamath, Trinity, and South Fork Trinity rivers, and at those times, defined as open in the Commission-adopted regulations. The sport fishery for steelhead is conducted in those areas, plus most portions of the Klamath's tributary systems at those times defined as open in the Commission-adopted regulations. Regulations applicable to the 1990 sport fisheries for salmon and steelhead in the Klamath basin are presented in Attachment 1.

The limits of angler harvest of fall chinook salmon in the Klamath River basin are predicated on a system of allocations developed by the Klamath Fishery Management Council and the PFMC. The sport harvest allocation has been 9-12% of the in-river run size as determined by the PFMC. The sport fishery is managed, based on the harvest downstream of the Highway 101 bridge, to achieve an equitable share of harvest in the Klamath River downstream of the Highway 101 bridge, upstream from the Highway 101 bridge to Hornbrook, and in the Trinity River upstream of Weitchpec.

Commencing 43 days after one-third of the allowable Klamath River basin sport catch is taken below the Highway 101 bridge, retention of any chinook salmon over 22 inches in length is prohibited in the remainder of the basin. After the basin-wide sport take equals or exceeds 40% below Highway 101 bridge, that fishery is closed to the retention of chinook salmon over 22 inches. Projected 1990 angler harvest of adult spring chinook salmon in the Klamath River system is based, in part, on the earlier referenced U.S. Fish and Wildlife Service's March 1990 report titled, "Klamath-Trinity River Basin Spring Chinook Salmon Stock Evaluation and Run-size Forecast". Based on this report, and revised run-size estimates and estimated gill net harvests in 1990, it is projected that anglers will harvest 1,328 adult spring chinook salmon in the main stem Trinity River upstream of Junction City (RM 83) in 1990. This equates to 13% of the estimated run size upstream of Junction City. The

Department does not monitor sport harvest downstream of Junction City. However, based on information from DFG personnel familiar with the Klamath system, it is estimated that the sport harvest in the Trinity River downstream of Junction City is approximately one-half the sport harvest upstream. The harvest rate in this portion of the river is inversely correlated to flow conditions; the lower the flow, the higher the catch rate. It is expected that the greatest portion of these harvested fish will be taken at three locations: Grays Falls, (Rm. 42), Burnt Ranch Falls, (Rm.44), and Hell Hole, (Rm. 68). It is projected that angler harvest of adult spring chinook in the main stem Klamath and main stem South Fork Trinity rivers will be negligible.

VI. CONTROL AND MONITORING OF THE SPORT FISHERY

Day to day enforcement of established angling regulations will be carried out by Department enforcement officers. Monitoring of the sport fishery will be accomplished primarily by professional and technical personnel assigned to the Department's ongoing Klamath-Trinity Program. To the extent such are developed, estimates of angler harvest will be developed following completion of the 1990 season.

The Department will determine the 1990 angler harvest of fall chinook salmon in the entire Klamath River basin by means of the same system of creel census and fish tagging operations employed in recent years.

The Department will determine the 1990 angler harvest of adult spring chinook upstream of its Junction City Weir through the use of reward tags placed on a portion of the run at that site. At present, there are no plans to monitor angler harvest of spring chinook salmon in other parts of the Klamath system in 1990.

The Department will determine the angler harvest of fall steelhead in the Trinity River basin through the use of reward tags placed on portions of the run passing the Willow Creek, Junction City, and Sandy Bar (lower South Fork Trinity River) weirs. Efforts to monitor angler harvest of fall steelhead in remaining portions of the Klamath basin in 1990 will be limited to the collection of creel census and tag return data obtained incidentally to efforts directed at fall chinook. Similarly, Department efforts to monitor the harvest of coho salmon in the Klamath system in 1990 will also be limited to data collection efforts done incidental to work directed at fall chinook salmon.

2.10. Fishing Methods—Exceptions.

(a) It is unlawful to use any multiple hook with the shank longer than two inches or with a distance between its points of more than 1½ inches.

(b) It is unlawful to use gear in which any multiple hook is directly or indirectly attached closer than 18 inches to any weight exceeding one-half ounce.

(c) In the North Coast District (except the Klamath River), all weight if not part of a manufactured or conventional lure, must be attached above the hook and no hook may be directly or indirectly attached closer than 18 inches to any weight exceeding one-half ounce.

(d) In addition to the provisions of subsections (a), (b) and (c) of this section, no person shall use any multiple hook with a distance greater than ¾ inch measured from the hook point to the shank, or any single hook larger than ½ inch measured from the hook point to the shank or any hook with a weight attached directly or indirectly to the hook or line within 18 inches of the hook in the following waters:

(1) All year in rivers and streams in the North Coast District (except the Klamath River below the Highway 101 Bridge and the Smith River below the mouth of Rowdy Creek), Mendocino, Sonoma and Marin counties, (except the Russian River) and the Sacramento River between Keswick Dam and the Deschutes Road Bridge and all tributaries to the Sacramento River below Shasta Dam in Shasta and Tehama counties.

1.73. Salmon includes chinook, coho, pink, chum and sockeye salmon.

1.74. Salmon Punch Card Requirement: Anglers must have a nontransferable punch card issued by the department in their possession while fishing for salmon in ocean waters north of Point Delgada or in waters of the Klamath River system. Anglers must immediately upon taking an adult salmon over 20 inches in length in ocean waters and over 22 inches in length in the river system make a hole in the punch card in one of the designated locations and record the month, day, area of catch and species of salmon in the spaces provided adjacent to the punch.

A punch card shall be valid for the calendar year. No person may purchase or possess more than one punch card or any punch card other than his own. Upon purchase of the punch card, the card number shall be entered in ink on the back of the angler's sport fishing license. The sport fishing license number shall be entered on the punch card in the appropriate box.

Anglers must return punch cards to the department within 30 days of the close of the calendar year. The department may charge a fee for each punch card issued to defray printing and related administrative costs. The amount of said fee shall be $1.00. Pursuant to Section 1053 of the Fish and Game Code, an additional $0.50 will be charged by vendors authorized by the Department.

1.75. Salmon Spawning Areas: No salmon may be taken or possessed on any salmon spawning area when it is closed to salmon fishing.

13.36. Klamath River Salmon Restrictions (Siskiyou and Humboldt cos.).

(a) Size and Species Restrictions:

(1) Restrictions Below Highway 101 Bridge: In those years when the department determines the total sport catch of adult king salmon below the Highway 101 bridge equals or exceeds 40% of the Klamath River basin allowable sport catch (historically this has been 9–12% of the estimated in-river run size as determined by the Pacific Fishery Management Council), no person shall retain any king salmon over 22.0 inches total length.

(2) Restrictions From Iron Gate Dam to Highway 101 Bridge: No person shall retain any king salmon over 22.0 inches total length from Iron Gate Dam near Hornbrook downstream to the Highway 101 bridge commencing 43 days after the department determines that one-third of the allowable Klamath River basin sport catch has been taken below the Highway 101 bridge in any year.

(3) Exception to subsection 13.36(a) (2): King salmon over 22.0 inches total length may be taken from 3,500 feet below the Iron Gate Dam to the Interstate 5 bridge when the department determines that the adult fall king salmon spawning escapement at Iron Gate Hatchery exceeds 8,000 fish during any year subsection 13.36(a) (2) is implemented.

13.86. Trinity River and South Fork Trinity River Salmon Restrictions (Trinity Co.).

(a) Size and Species Restrictions: No person shall retain any king salmon over 22.0 inches total length in the Trinity River and South Fork Trinity River commencing 43 days after the department determines that one-third of the allowable Klamath River basin sport catch has been taken below the Highway 101 bridge in any year. The department shall inform the commission, and the public via the news media, prior to any implementation of the provisions of this subsection.

(91) Klamath River Regulations. (See Section 1.74 for salmon punch card requirements.)		
(A) Klamath River main stem and all tributaries above Iron Gate Dam except Shovel Creek and tributaries. The Klamath River main stem within 250 feet of the mouth of Shovel Creek is closed to all fishing November 16 through June 15.	Last Saturday in Apr. through Nov. 15	5 per day 10 in possession
(B) Shovel Creek and tributaries above mouth of Panther Creek.	Saturday preceding Memorial Day through Nov. 15	5
(C) Shovel Creek and tributaries up to and including Panther Creek.	Closed to all fishing all year	
(D) Bogus Creek and tributaries.	Last Saturday in Apr. through Aug. 31	2
(E) Klamath River main stem from Iron Gate Dam to 3,500 feet downstream.	Closed to all fishing all year	
(F) Klamath River main stem from 3,500 feet below Iron Gate Dam to mouth. NO FISHING IS ALLOWED WITHIN 400 FEET OF ANY U.S. FISH AND WILDLIFE OR DEPARTMENT OF FISH AND GAME SEINING OPERATION. AND FROM THE ISHI PISHI FALLS ROAD BRIDGE UPSTREAM TO AND INCLUDING ISHI PISHI FALLS FROM AUGUST 15 THROUGH NOVEMBER 1.	All year	3 trout and 5 salmon per day, only 2 salmon more than 22 inches total length per day. No more than 6 salmon over 22 inches in any 7 consecutive days. No more than 8 salmon may be possessed, of which no more than 6 may be over 22 inches total length
(G) Salmon River main stem, main stem of North Fork, and main stem of South Fork.	Last Saturday in Apr. through Feb. 28	2 trout 0 salmon
(H) Scott River main stem from mouth to Fort Jones-Greenview bridge.	Last Saturday in Apr. through Feb. 28	2 trout 0 salmon
(I) Shasta River and tributaries (Siskiyou Co.).		
1 Shasta River and tributaries above Dwinnell Dam.	Last Saturday in Apr. through Nov. 15	5 per day 10 in possession
2 Shasta River and all tributaries between Interstate 5 and Dwinnell Dam.	Last Saturday in Apr. through Nov. 15	2 trout 0 salmon
3 Shasta River from Highway 5 to 250 feet above the Department of Fish and Game counting weir.	Last Saturday in Apr. through Feb. 28	2 trout 0 salmon
4 Shasta River from 250 feet above the Department of Fish and Game counting weir to mouth.	Last Saturday in Apr. through Aug. 31	2 trout 0 salmon
	Nov. 16 through Feb. 28	2 trout 0 salmon
(J) All tributaries of the main stem Klamath, Salmon, Scott and Shasta rivers and parts of the main stems not listed above.	Last Saturday in Apr. through Nov. 15 Maximum size limit: 14 inches total length.	2 trout 0 salmon
(K) Trinity River.		
1 Trinity River and tributaries above Lewiston Dam.	Last Saturday in Apr. through Nov. 15	5 per day 10 in possession
2 Lewiston Dam to 250 feet downstream from Lewiston Dam.	Closed to all fishing all year	
3 From 250 feet below Lewiston Dam to Old Lewiston bridge.	Last Saturday in Apr. through Sept. 15 Only artificial flies with barbless hooks may be used.	2 trout 0 salmon
4 From Old Lewiston bridge to the Highway 299 West bridge at Cedar Flat.	Last Saturday in Apr. through Mar. 14	3 trout and 5 salmon per day, only 2 salmon more than 22 inches total length per day. No more than 6 salmon over 22 inches in any 7 consecutive days. No more than 8 salmon may be possessed, of which no more than 6 may be over 22 inches total length.
5 From the Highway 299 West bridge at Cedar Flat downstream to the Hawkins Bar Bridge (Road to Denney).	Last Saturday in Apr. through Aug. 31	"
	Nov. 16 through Mar. 14	"
6 From Hawkins Bar Bridge (Road to Denney) to the mouth of the South Fork Trinity.	Last Saturday in Apr. through Mar. 14	"
7 The main stem Trinity River from the mouth of the South Fork Trinity to the mouth of the Trinity and the South Fork Trinity downstream from the Highway 36 bridge at Forest Glen.	All year	"

Attachment 2
to ATTACHMENT 9

KLAMATH RIVER BASIN FALL CHINOOK SALMON RUN-SIZE, HARVEST AND SPAWNER ESCAPEMENT--1989 SEASON a/

The 1989 fall chinook salmon run into the Klamath River system has turned out to be somewhat smaller than that projected preseason. Despite this, the 1989 run is still the fifth largest recorded since 1978, when the California Department of Fish and Game began generating annual basin-wide figures.

Earlier this year, as part of efforts to formulate 1989 season fishing regulations, fisheries scientists projected that 165,900 adult fall chinook salmon would return to the Klamath River this fall. Based on this projection, 67,600 adults were allocated for harvest by the in-river fisheries, with the remaining 98,300 dedicated to natural and hatchery spawning escapements. The following table presents, in abbreviated form, 1989 preseason adult harvest and spawner escapement projections, along with corresponding postseason estimates.

		Preseason projection/ allocation	Postseason estimate (*)
Harvest			
Indian net		52,000	45,565 (87.6)
Angler		15,600	9,831 (63.0)
	Subtotals	67,600	55,396 (81.9)
Spawner escapement			
Natural		76,700	45,783 (59.7)
Hatchery		21,600	21,296 (98.6)
	Subtotals	98,300	67,079 (68.2)
	TOTALS	165,900	122,475 (73.8)

* Percent of projected/allocated figures in parentheses.

Complete run-size, harvest and spawner escapement figures for both adults and grilse for years 1978-1989 are presented in the accompanying table.

a/ Prepared December 11, 1989, by California Department of Fish and Game, Klamath-Trinity Program.

Klamath River Basin Fall Chinook Spawner Escapement, In-river Harvest and Run-size Estimates, 1978-1989 a/

	1978			1979			1980		
	Grilse	Adults	Totals	Grilse	Adults	Totals	Grilse	Adults	Totals
SPAWNER ESCAPEMENT									
HATCHERY									
Iron Gate Hatchery	915	6,925	7,040	257	2,301	2,558	451	2,412	2,863
Trinity River Hatchery	1,325	6,034	7,359	964	1,335	2,299	2,256	4,099	6,355
Subtotals	2,240	12,959	15,199	1,221	3,636	4,857	2,707	6,511	9,218
NATURAL									
Trinity River basin (above Willow Creek, excluding TRH)	4,712	31,052	35,764	3,936	8,028	11,964	16,837	7,700	24,537
Salmon River basin	1,400	2,600	4,000	150	1,000	1,150	200	800	1,000
Scott River basin	1,909	3,423	5,332	428	3,396	3,824	2,245	2,032	4,277
Shasta River basin	6,707	12,024	18,731	1,040	7,111	8,151	4,334	3,762	8,096
Bogus Creek basin	651	4,928	5,579	494	5,444	5,938	1,749	3,321	5,070
Main stem Klamath River (excluding Iron Gate Hatchery)	300	1,700	2,000	466	4,190	4,656	867	2,468	3,335
Misc. Klamath tributaries (above Indian Reservations)	735	2,765	3,500	147	1,068	1,215	500	1,000	1,500
Indian Reservation tributaries	b/	b/	b/	100 c/	400 c/	500 c/	250 c/	400 c/	650 c/
Subtotals	16,414	58,492	74,906	6,761	30,637	37,398	26,982	21,483	48,465
TOTAL SPAWNER ESCAPEMENT	18,654	71,451	90,105	7,982	34,273	42,255	29,689	27,994	57,683
IN-RIVER HARVEST									
ANGLER HARVEST									
Klamath River below Highway 101 bridge	122	854	976	216	484	700	835 d/	727 d/	1,562 d/
Trinity River basin above Willow Creek	e/	e/	e/	765	1,157	1,922	2,456	998	3,454
Balance of Klamath system	1,960	840	2,800	1,200	500	1,700	2,600 d/	2,771 d/	5,371 d/
Subtotals	2,082	1,694	3,776	2,181	2,141	4,322	5,891	4,496 d/	10,387
INDIAN NET HARVEST f/									
Klamath River below Highway 101 bridge	-	-	-	-	-	-	495	9,605	10,100
Klamath River - 101 to Trinity mouth	-	-	-	-	-	-	272	1,528	1,800
Trinity River	-	-	-	-	-	-	220	880	1,100
Subtotals	1,800	18,200	20,000	1,350	13,650	15,000	987	12,013	13,000
TOTAL IN-RIVER HARVEST	3,882	19,894	23,776	3,531	15,791	19,322	6,878 d/	16,509 d/	23,387 d/
IN-RIVER RUN									
TOTAL IN-RIVER RUN	22,536	91,345	113,881	11,513	50,064	61,577	36,567 d/	44,503 d/	81,070 d/

(continued on next page

Klamath River Basin Fall Chinook Spawner Escapement, In-river Harvest and Run-size Estimates, 1978-1989 a/ (continued)

	1981			1982			1983		
	Grilse	Adults	Totals	Grilse	Adults	Totals	Grilse	Adults	Totals
SPAWNER ESCAPEMENT									
HATCHERY									
Iron Gate Hatchery	540	2,055	2,595	1,033	0,353	10,106	514	0,371	0,005
Trinity River Hatchery	1,004	2,370	3,374	4,235	2,050	6,293	271	5,494	5,765
Subtotals	1,544	4,425	5,969	6,068	10,411	16,479	785	13,865	14,650
NATURAL									
Trinity River basin (above Willow Creek, excluding TRH)	5,906	15,340	21,246	8,149	9,274	17,423	853	17,284	18,137
Salmon River basin	450	750	1,200	300	1,000	1,300	75	1,200	1,275
Scott River basin	3,409	3,147	6,556	4,350	5,826	10,176	170	3,398	3,568
Shasta River basin	4,330	7,890	12,220	1,922	6,533	8,455	753	3,119	3,872
Bogus Creek basin	912	2,730	3,642	2,325	4,818	7,143	335	2,713	3,048
Main stem Klamath River (excluding Iron Gate Hatchery)	1,000	3,000	4,000	1,000	3,000	4,000	200	1,800	2,000
Misc. Klamath tributaries (above Indian Reservations)	500	1,000	1,500	600	1,500	2,100	140	1,270	1,410
Indian Reservation tributaries	b/	b/	b/	b/	b/	b/	b/	b/	b/
Subtotals	16,507	33,857	50,364	18,646	31,951	50,597	2,526	30,784	33,310
TOTAL SPAWNER ESCAPEMENT	18,051	38,282	56,333	24,714	42,362	67,076	3,311	44,649	47,960
IN-RIVER HARVEST									
ANGLER HARVEST									
Klamath River below Highway 101 bridge	536	1,714	2,250	1,252	3,539	4,791	60	750	810
Trinity River basin above Willow Creek	1,456	3,174	4,630	2,554	2,321	4,875	116	2,360	2,476
Balance of Klamath system	5,260	1,095	6,355	8,678	2,479	11,157	175	1,125	1,300
Subtotals	7,252	5,983	13,235	12,484	8,339	20,823	351	4,235	4,586
INDIAN NET HARVEST c/									
Klamath River below Highway 101 bridge	912	23,097	24,009	290	4,547	4,837	12	800	812
Klamath River - 101 to Trinity mouth	1,104	8,405	9,509	1,195	8,424	9,619	121	5,700	5,821
Trinity River	449	1,531	1,980	314	1,511	1,825	30	1,390	1,420
Subtotals	2,465	33,033	35,498	1,799	14,482	16,281	163	7,890	8,053
TOTAL IN-RIVER HARVEST	9,717	39,016	48,733	14,283	22,821	37,104	514	12,125	12,639
IN-RIVER RUN									
TOTAL IN-RIVER RUN	27,768	77,298	105,066	38,997	65,183	104,180	3,825	56,774	60,599

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Klamath River Basin Fall Chinook Spawner Escapement, In-river Harvest and Run-size Estimates, 1978-1989 a/ (continued)

	1984			1985			1986		
	Grilse	Adults	Totals	Grilse	Adults	Totals	Grilse	Adults	Totals
SPAWNER ESCAPEMENT									
HATCHERY									
Iron Gate Hatchery	764	5,330	6,094	2,159	19,951	22,110	1,461	17,096	18,557
Trinity River Hatchery	766	2,166	2,932	18,166	2,583	20,749	3,609	15,795	19,404
Subtotals	1,530	7,496	9,026	20,325	22,534	42,859	5,070	32,891	37,961
NATURAL									
Trinity River basin (above Willow Creek, excluding TRH)	3,416	5,654	9,070	29,454	9,217	38,671	20,459	92,548	113,007
Salmon River basin	216 g/	1,226 g/	1,442 g/	905	2,259	3,164	949	2,716	3,665
Scott River basin	358	1,443	1,801	1,357	3,051	4,408	4,865	3,176	8,041
Shasta River basin	480	2,362	2,842	2,227	2,897	5,124	683	3,274	3,957
Bogus Creek basin	465	3,039	3,504	1,156	3,491	4,647	1,184	6,124	7,308
Main stem Klamath River (excluding Iron Gate Hatchery)	200	1,350	1,550	156	468	624	196	603	799
Misc. Klamath tributaries (above Indian Reservations)	150	990	1,140	646	4,214	4,860	606	4,919	5,525
Indian Reservation tributaries	b/	b/	b/	50 h/	80 h/	130 h/	b/	b/	
Subtotals	5,285	16,064	21,349	35,951	25,677	61,628	28,942	113,360	142,302
TOTAL SPAWNER ESCAPEMENT	6,815	23,560	30,375	56,276	48,211	104,487	34,012	146,251	180,263
IN-RIVER HARVEST									
ANGLER HARVEST									
Klamath River below Highway 101 bridge	175	548	723	1,479	2,427 i/	3,906	704	4,610	3,160
Trinity River basin above Willow Creek	393	736	1,129	5,442	154 i/	5,596	3,438	9,034	15,477
Balance of Klamath system	384	2,056	2,440	4,274	1,001 i/	5,275	5,266	10,541	11,798
Subtotals	952	3,340	4,292	11,195	3,582 i/	14,777	9,408	24,185 d/	30,435
INDIAN NET HARVEST e/									
Klamath River below Highway 101 bridge	132	11,878	12,010	132	5,700	5,832	191	15,286	15,477
Klamath River - 101 to Trinity mouth	103	5,622	5,005	476	3,925	4,401	377	5,033	5,410
Trinity River	140	1,170	1,310	947 j/	1,941 j/	2,888 j/	286	4,808	5,094
Subtotals	455	18,670	19,125	1,555	11,566	13,121	854	25,127	25,981
TOTAL IN-RIVER HARVEST	1,407	22,010	23,417	12,750	15,148	27,898	10,262	49,312	56,416
IN-RIVER RUN									
TOTAL IN-RIVER RUN	8,222	45,570	53,792	69,026	63,359	132,385	44,274	195,563	236,679

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Klamath River Basin Fall Chinook Spawner Escapement, In-river Harvest and Run-size Estimates, 1978-1989 a/ (Continued)

	1987			1988			1989		
	Grilse	Adults	Totals	Grilse	Adults	Totals	Grilse	Adults	Totals
SPAWNER ESCAPEMENT									
HATCHERY									
Iron Gate Hatchery	1,025	15,109	17,014	609	16,106	16,715	831	10,059	11,690
Trinity River Hatchery	2,453	13,934	16,387	4,752	17,352	22,104	319	10,437	10,756
Subtotals	4,278	29,123	33,401	5,361	33,458	38,819	1,150	21,296	22,446
NATURAL									
Trinity River basin (above Hillow Creek, excluding TRH)	5,949	71,920	77,869	10,626	44,616	55,242	2,685	30,100	32,785
Salmon River basin	118	3,832	3,950	327	3,273	3,600	612	3,478	4,090
Scott River basin	797	7,769	8,566	473	4,727	5,200	1,527	4,360	5,887
Shasta River basin	398	4,299	4,697	256	2,586	2,842	31	1,554	1,585
Bogus Creek basin	1,208	9,748	10,956	225	16,215	16,440	288	2,385	2,673
Main stem Klamath River (excluding Iron Gate Hatchery)	65	863	928	164	2,982	3,146	192	1,033	1,225
Misc. Klamath tributaries (above Indian Reservations)	237	3,286	3,523	418	4,167	4,585	208	2,575	2,783
Indian Reservation tributaries	b/	b/	b/	55 k/	320 k/	375 k/	27 h/	298 h/	325 h/
Subtotals	8,772	101,717	110,489	12,544	78,886	91,430	5,570	45,783	51,353
TOTAL SPAWNER ESCAPEMENT	13,050	130,840	143,890	17,905	112,344	130,249	6,720	67,079	73,799
IN-RIVER HARVEST									
ANGLER HARVEST									
Klamath River below Highway 101 bridge	146	2,455	2,601	124	3,367	3,491	141	1,596	1,737
Trinity River basin above Hillow Creek	923	9,433	10,356	2,735	9,341	12,076	158	2,134	2,292
Balance of Klamath system	4,367	8,281	12,648	2,552	9,495	12,047	2,487	6,101	8,588
Subtotals	5,436	20,169	25,605	5,411	22,203	27,614	2,786	9,831	12,617
INDIAN NET HARVEST d/									
Klamath River below Highway 101 bridge	36	39,978	40,014	138	36,914	37,052	0	37,130	37,130
Klamath River - 101 to Trinity mouth	117	8,136	8,253	173	9,667	9,840	120	4,961	5,081
Trinity River	262	4,982	5,244	267	5,070	5,337	71	3,474	3,545
Subtotals	415	53,096	53,511	578	51,651	52,229	191	45,565	45,756
TOTAL IN-RIVER HARVEST	5,851	73,265	79,116	5,989	73,854	79,843	2,977	55,396	58,373
IN-RIVER RUN									
TOTAL IN-RIVER RUN	18,901	204,105	223,006	23,894	186,198	210,092	9,697	122,475	132,172

(Continued on next page)

Klamath River Basin Fall Chinook Spawner Escapement, In-river Harvest and Run-size Estimates, 1978-1989 a/ (continued)

1/ Prepared December 11, 1989. All figures are California Department of Fish and Game counts/estimates unless otherwise indicated. All figures for Iron Gate and Trinity River hatcheries represent counts of fish entering those facilities. All spawner escapement figures for the Shasta River basin for 1978-1987, plus those for the Bogus Creek basin for 1980-1989 are based on counts made at counting stations located near the mouths of those streams. All remaining spawner escapements and all harvest figures are estimates developed from data obtained through ongoing field investigations in the Klamath-Trinity system. Figures for years through 1988 are final; 1989 figures are preliminary, subject to revision.

b/ Figure not available.

c/ U.S. Fish and Wildlife Service (USFWS) estimate.

d/ Figure shown here differs from previously published table prepared December 10, 1984; previous figure incorrect.

e/ In 1978, the Klamath River system sport salmon fishing season was closed August 25. There was essentially no sport harvest of fall chinook in the Trinity River basin in 1978.

f/ USFWS estimates for years through 1982; 1983 through 1989 estimates jointly made by USFWS and Hoopa Valley Business Council Fisheries Department (HVBCFD).

g/ U.S. Forest Service estimate.

h/ HVBCFD estimate. Estimate for streams in Hoopa Valley Indian Reservation only.

i/ In 1985, the Klamath River system sport salmon fishing season was closed to the taking of all salmon below the U.S. Highway 101 bridge from September 9 through December 31; the Klamath from the U.S. Highway 101 bridge to Iron Gate Dam and the Trinity River from its mouth to Lewiston Dam were closed to the taking of salmon 22 inches and longer from September 23 through December 31, 1985.

j/ Estimates for Hoopa Valley Indian Reservation portion of catch (=947 grilse and 1,941 adults) are of catch occurring during open fishing periods only.

k/ Estimates jointly made by USFWS and HVBCFD.

State of California
Fish and Game Commission
Statement of Purpose for Regulatory Action
(Pre-adoption)

I. Date of Statement of Purpose: January 31, 1990

II. Date of Pre-adoption Statement of Purpose: March 15, 1990

III. Date and Location of Hearing:

Final Adoption Hearing: Date: April 6, 1990

Location: Long Beach

IV. Description of Modifications of Pre-publication of Notice Statement of Purpose:

The Pre-publication of Notice proposed a sport salmon season in ocean waters north of Horse Mountain from May 1 through the Sunday following Labor Day, a season extension to October 31 for ocean waters from Trinidad Head to Punta Gorda out to 6 nautical miles of shore and a daily limit of two salmon of which no more than one may be a king salmon from July 1 through August 15. Two additional alternatives have been proposed. The second alternative has the same season dates and boundaries as the first but would permit fishing only from Thursday through Monday for the period July 5 through August 15. The third alternative would retain the existing season from May 1 through September 30 but would close the area to sport salmon fishing for the period July 23 through July 29. The late season extension from Trinidad Head to Punta Gorda out to 6 nautical miles of shore would extend from October 1 through October 31.

V. Reasons for Modification of Pre-publication of Notice Statement of Purpose:

The Pacific Fishery Management Council (PFMC) met on March 6-9, 1990 and approved three sport salmon seasons for public review. In addition to the alternative recommended by the Klamath Fishery Management Council, the PFMC developed two new alternatives. The two new alternatives are designed to meet escapement and allocation goals of Klamath River origin fall run king salmon while not shifting fishing pressure on to silver salmon as would be done under the first alternative. Silver salmon stocks are low in 1990 and the PFMC is seeking to reduce the coastwide take of silver salmon.

VI. Summary of Primary Considerations Raised in Opposition and in Support:

Opposition

Opposition to Alternative 1 is based on concerns over the potential loss of king salmon that may be hooked and released during the one king salmon only portion of the seasons and because of the added fishing pressure this places on silver salmon. Opposition to Alternatives 2 and 3 is based on the fact that there would be periods closed to fishing.

Support

Support for Alternative 1 is based on having an uninterrupted season with a season long two fish bag limit. This option is favored by sport anglers. Alternatives 2 and 3 are supported on the grounds that reducing fishing time will reduce the take of Klamath origin king salmon without causing additional hooking mortality and increased take of silver salmon.

Informative Digest

Existing regulations of subsection 27.80(b)(3) provide for an ocean sport salmon season north of Horse Mountain from May 1 through September 30. Existing regulations of subsection 27.80(c)(1) provide for a daily limit of two salmon and a limit of six salmon in seven consecutive calendar days, with the exception that if the Department determines that by July 15 the sport take of king salmon between Horse Mountain and Orford Reef Red Buoy equals or exceeds 50 percent of the Klamath Management Zone harvest guidelines (as determined by the PFMC), the daily bag limit of two salmon may contain no more than one king salmon. Proposed regulations provide for three alternatives. Two alternatives provide for a sport salmon season north of Horse Mountain from May 1 through the Sunday following Labor Day, except that ocean waters from Trinidad Head to Punta Gorda, out to 6 nautical miles of shore, would remain open through October 31. These two alternatives differ in that one sets the daily bag limit at two salmon, of which only one may be a king salmon for the period July 1 through August 15 while the other closes the area to fishing on Tuesdays and Wednesdays for the period July 5 through August 15. The third alternative provides for a sport salmon season north of Horse Mountain from May 1 through September 30, except that the period July 23 through July 29 would be closed; ocean waters from Trinidad Head to Punta Gorda, out to 6 nautical miles of shore, would remain open through October 31 under this alternative.

Alternative 1

Section 27.80, Title 14, CCR, is amended to read:

27.80. Salmon.

(a) Methods of take:

(1) Only by angling as defined in Section 1.05. No sinkers or weights exceeding four pounds may be used, except that a fishing line may be attached to a sinker or weight of any size if such sinker or weight is suspended by a separate line and the fishing line is released automatically by a mechanical device from the sinker or weight when any fish is hooked. See Sections 1.72, 28.65 and 28.70.

(2) Only single barbless hooks may be used to take salmon in the ocean north of Point Conception.

(b) Open season:

(1) Tomales Bay: All year.

(2) All other waters of the ocean and San Francisco Bay District south of Horse Mountain (40° 05'N.lat.) from the Saturday nearest February 15 through the Sunday nearest November 15.

(3) All waters of the ocean north of Horse Mountain from May 1 through ~~September 30.~~ the first Sunday following Labor Day.

EXCEPTION: Ocean waters from Punta Gorda (40° 15'30"N.lat.) to Trinidad Head (41° 03'30"N.lat.) out to 6 nautical miles of shore are open May 1 through October 31.

EXCEPTION: Humboldt Bay is open all year to the taking of salmon.

~~NOTE: The length of the salmon season in ocean waters is subject to change depending upon action taken by the U.S. Secretary of Commerce. The Department shall notify the public of any change in the salmon regulations through the news media.~~

(c) Limit:

(1) North of Horse Mountain, two salmon per day. No more than six salmon may be taken during any consecutive seven calendar day period.

EXCEPTION: July 1 through August 15, two salmon per day of which no more than one may be a king salmon. ~~If the department determines that by July 15 the total sport take of king salmon between Horse Mountain and Orford Reef Red Buoy (42° 45'11"N.lat.) equals or exceeds 50 percent of the Klamath Management Zone harvest guidelines (as determined by the Pacific Fishery Management Council), not more than two salmon of which no more than one may be a king salmon, may be taken from August 1 through September 30. The department shall inform the commission and the public via the news media by July 22 if the aforementioned king salmon limit reduction will be imposed. Provisions of Section 1.74, Title 14, CCR, shall be employed in the enforcement of multi-day bag limits.~~

Authority: Sections 200, 202, 205, 220 and 7891, Fish and Game Code.
Reference: Sections 200, 202 and 205, Fish and Game Code.

Alternative 2

Section 27.80, Title 14, CCR, is amended to read:

27.80. Salmon.

(a) Methods of take:
(1) Only by angling as defined in Section 1.05. No sinkers or weights exceeding four pounds may be used, except that a fishing line may be attached to a sinker or weight of any size if such sinker or weight is suspended by a separate line and the fishing line is released automatically by a mechanical device from the sinker or weight when any fish is hooked. See Sections 1.72, 28.65 and 28.70.
(2) Only single barbless hooks may be used to take salmon in the ocean north of Point Conception.
(b) Open season:
(1) Tomales Bay: All year.
(2) All other waters of the ocean and San Francisco Bay District south of Horse Mountain (40°05'N.lat.) from the Saturday nearest February 15 through the Sunday nearest November 15.
(3) All waters of the ocean north of Horse Mountain from May 1 through ~~September 30.~~ the first Sunday following Labor Day.
EXCEPTION 1: July 5 through August 15, open only on Thursdays, Fridays, Saturday, Sundays and Mondays.
EXCEPTION 2: Ocean waters from Punta Gorda (40°15'30"N.lat.) to Trinidad Head (41°03'30"N.lat.) out to 6 nautical miles of shore are open May 1 through October 31.
EXCEPTION 3: Humboldt Bay is open all year to the taking of salmon.
~~NOTE: The length of the salmon season in ocean waters is subject to change depending upon action taken by the U.S. Secretary of Commerce. The Department shall notify the public of any change in the salmon regulations through the news media.~~
(c) Limit:
(1) North of Horse Mountain, two salmon per day. No more than six salmon may be taken during any consecutive seven calendar day period.
EXCEPTION: July 1 through August 15, two salmon per day of which no more than one may be a king salmon. ~~If the department determines that by July 15 the total sport take of king salmon between Horse Mountain and Orford Reef Red Buoy (42°45'11"N.lat.) equals or exceeds 50 percent of the Klamath Management Zone harvest guidelines (as determined by the Pacific Fishery Management Council), not more than two salmon of which no more than one may be a king salmon, may be taken from August 1 through September 30. The department shall inform the commission and the public via the news media by July 22 if the aforementioned king salmon limit reduction will be imposed. Provisions of Section 1.74, Title 14, CCR, shall be employed in the enforcement of multi-day bag limits.~~

Authority: Sections 200, 202, 205, 220 and 7891, Fish and Game Code.
Reference: Sections 200, 202 and 205, Fish and Game Code.

Alternative 3

Section 27.80, Title 14, CCR, is amended to read:

27.80. Salmon.

(a) Methods of take:
(1) Only by angling as defined in Section 1.05. No sinkers or weights exceeding four pounds may be used, except that a fishing line may be attached to a sinker or weight of any size if such sinker or weight is suspended by a separate line and the fishing line is released automatically by a mechanical device from the sinker or weight when any fish is hooked. See Sections 1.72, 28.65 and 28.70.
(2) Only single barbless hooks may be used to take salmon in the ocean north of Point Conception.
(b) Open season:
(1) Tomales Bay: All year.
(2) All other waters of the ocean and San Francisco Bay District south of Horse Mountain (40°05'N.lat.) from the Saturday nearest February 15 through the Sunday nearest November 15.
(3) All waters of the ocean north of Horse Mountain from May 1 through July 22 and July 30 through September 30.
EXCEPTION: Ocean waters from Punta Gorda (40°15'30"N.lat.) to Trinidad Head (41°03'30"N.lat.) out to 6 nautical miles of shore are open May 1 through October 31.
EXCEPTION: Humboldt Bay is open all year to the taking of salmon.
~~NOTE: The length of the salmon season in ocean waters is subject to change depending upon action taken by the U.S. Secretary of Commerce. The Department shall notify the public of any change in the salmon regulations through the news media.~~
(c) Limit:
(1) North of Horse Mountain, two salmon per day. No more than six salmon may be taken during any consecutive seven calendar day period.
EXCEPTION: July 1 through August 15, two salmon per day of which no more than one may be a king salmon. ~~If the department determines that by July 15 the total sport take of king salmon between Horse Mountain and Orford Reef Red Buoy (42°45'11"N.lat.) equals or exceeds 50 percent of the Klamath Management Zone harvest guidelines (as determined by the Pacific Fishery Management Council), not more than two salmon of which no more than one may be a king salmon, may be taken from August 1 through September 30. The department shall inform the commission and the public via the news media by July 22 if the aforementioned king salmon limit reduction will be imposed. Provisions of Section 1.74, Title 14, CCR, shall be employed in the enforcement of multi-day bag limits.~~

Authority: Sections 200, 202, 205, 220 and 7891, Fish and Game Code.
Reference: Sections 200, 202 and 205, Fish and Game Code.

3/30/90

To: PFMC, KFMC and BIA
From: Merk Oliver

I am a Yurok fisherman. I live in Requa and my livelihood depends on fishing. I would like to comment on both the way the Indian fishery is regulated and the way our allocation is made. Our fishery is regulated by various agencies, especially the BIA, the KFMC, and the PFMC, who often work at cross purposes, or communicate poorly. What I would like to talk about concerns all of the agencies involved.

For thousands of years the Indians built their livelihood and culture around salmon fishing, and for all those years we took care of the fish. When the white man came into our Indian country, he destroyed the spawning habitat through logging and mining. He overfished until the fish were seriously depleted, and then he denied the Indians the right to fish at all. I was a child when this happened, and for my entire lifetime I have been denied a decent livelihood. We need a livelihood as well as an anyone on this earth. The Indians along the Klamath River are fishermen just as much as Indians in Washington or Alaska, but because we live in California we are still only grudgingly included in fishing at all. All through the years, when commercial fishing of Klamath stocks was happening in the ocean, Indians could not fish, and California Fish and Game had control of Reservation waters. As the courts have said, they had no right to be here.

The resentment against the Indian fishery comes out in a time like this year when we are faced with a possible shortage of fish. Lately I have heard plenty of talk against the Indians, and this is having an effect on the KFMC recommendations. If you look at your own figures for income per boat for the Indians as compared to the ocean trollers, you will see that we are a long way from having even a poverty level livelihood. The trollers are concerned about making payments on expensive boats. During last summer's commercial season, I had to row because I could not afford repairs to my small outboard motor. It is because of things like this that I do not think that any of these agencies have a serious commitment to the Indian fishery.

One of the primary arguments in favor of passage of the Hupa-Yurok Settlement Act was that the Yuroks would have a good livelihood from their fishing resources. Here less than a year later the BIA and KFMC in their recommendations to the PFMC are taking this livelihood away. From whatever small income we do get from our

fish, the BIA taxes us 20%, and we never see the money again or have any accounting of what happens to it. We are not even allowed access to the open market. It seems where Indians are concerned, the government gives with one hand and takes away with several others. In the meantime our young people are leaving the reservation and our culture has become even more endangered than the natural stocks of fish that we are all trying to protect.

The KFMC in its deliberations gets bogged down in uncertain predictions of the number of fish available and shortsighted political haggling over how to "divide up the pie". There are some very vocal and hostile elements among the ocean and sports fishermen, both on the KFMC and among those making comments from the audience. They cast a negative tone to the deliberations and pit one user group against another. The ocean fishermen have been largely unregulated for a lifetime and they resent any other group having a right to fish, even though they take the lion's share of the fish. They want it all and they are always coming up with new schemes to get it all. Many of them move around to other areas when they cannot fish here. The Indians cannot go somewhere else. They talk about how their dollars will be lost to the local economy, but the Indian fishery contributes to the loical economy too, and our dollars are just as green as theirs are. They forget that salmon do not spawn in the ocean.

The inriver sports fishermen take fewer fish than other groups, but they seem to be less willing to compromise than anyone else. For years I worked on the river as a guide, but in the last twenty years some of the sportsmen have become so hostile toward Indians that we have been forced out of the guiding business. Many tourists are not even aware that they are on an Indian reservation when they come here, and a vocal minority of them don't care. We Indians have to step aside in our own homeland for the tourists. We have to fish only at night, and the BIA every year cuts off our subsistence fishing right after the commercial season for the tourists' benefit, even though (by your own numbers) we have not met our quota. While the BIA law enforcement of the Indian fishery is excessive, where the tourists are concerned, there is no law on the Klamath. I sit at my camp on the river and watch the sportsmen go by, with more poles in the water than people in the boat. I watch them snagging fish. They catch their limit, take their fish home, and come back again. California Fish and Game is nowhere to be seen, either in uniform or plainclothes. The money generated by the tourists contributes nothing to the reservation, because the campgrounds, guide services and stores on the reservation are all in the hands of whites. People have forgotten that the reservation was set aside for Indian purposes. As you can see, the way the entire fishing situation is managed has racial overtones.

In the meantime, others who have an inpact on Klamath River fish are hardly evey mentioned. The fishing begins in Southern California, but the fish taken there are not part of the discussion. Foreign vessels ("joint venture boats") take huge numbers of all kinds of fish, but they are not counted. We do not talk about predators either, even though the sea lion population at the river mouth has gotten out of hand. What about hooking mortality in the ocean? And the regulatory agencies go on making decisions based on who can shout the loudest, while losing sight of other priorities, like enhancement of the spawning grounds. And the Indians are going to lose out again, because we are a minority and because by culture and education and lack of lobbying resources we are not highly vocal.

There are enormous problems with the BIA's regulation of our fishery, and these problems are mostly ignored by the other agencies involved. The KFMC and the PFMC are willing to rubber stamp whatever regulations the BIA proposes. As I have said , they tax us 20%. They restrict us to one buyer of their choosing, so that the profits of the middleman and the processor go into white hands. Their law enforcement is hostile and is not designed to solve problems or provide assistance to the fishermen. They are there instantly, confiscating our nets at the least infraction of the rules, but when someone drops their net on top of yours they are not to be found. When the tourists cause trouble they are not willing to protect Indian interests, even though protecting the Indians' interests is supposed to be the primary function of the BIA. They give the state whatever it wants, even if what it wants is for the Indians to be off the river at certain times. They wrote confusing and wrongheaded regulations. They allow off reservation people too much influence and they hold meetings off the reservation. They are proposing major changes this year without thinking them through clearly and without talking to the traditional fishermen who know the fish and the river. They are proposing to fish the spring run again after it is already over. They are proposing a switch to 6 1/2" mesh, but the expected quotas are certainly not going to pay for us to replace our nets. This is the kind of regulation that the PFMC is about to put its rubber stamp of approval on. They use our lack of a tribal organization as an excuse, but at the present time they are the ones holding up our formation of a tribe.

All of my life I have heard the same excuses, like a stuck record. I hope that in my lifetime I will see some real changes, that this country will begin to make it right for the Indian people, and will acknowledge what has been taken away from us. I would sincerely like to see my children and grandchildren be able have a livelihood in their own Indian country.

Merle Oliver

ATTACHMENT 12

Klamath Fishery Management Council

Working to Restore Anadromous Fish in the Klamath River Basin

P.O. Box 1006, Yreka, California 96097

April 2, 1990

Honorable Manuel Lujan
Secretary of the Interior
Washington, D.C. 20240

Dear Mr. Secretary:

The Klamath Fishery Management Council was established to advise you on enhancement and management of Klamath River anadromous fish resources. We are concerned that the water flows to be released from Lewiston Dam may be completely inadequate to protect the fish resources of the Trinity River. We need your review and assistance quickly.

At our meeting of March 31, 1990, we heard Mr. Don Paff of the U.S. Bureau of Reclamation report that we may be facing a "critical dry year". Citing the Andrus secretarial decision of 1981, Mr. Paff stated his guidance was to release approximately 140,000 acre-feet for Trinity river flows while diverting the rest of the flow into the Central Valley Project (CVP), Sacramento River.

The Klamath Fishery Management Council consensus position is that 140,000 acre-feet is completely inadequate to protect fish resources in the Trinity River. Our harvest sacrifices and enhancement investments may be wasted. Some individuals are already suggesting Endangered Species Act review for some runs in the Trinity River. Diverting approximately 70% of the flow into the Sacramento under these conditions is of concern to us.

We urgently request that you consult with State, tribal, and Federal agencies to determine the biological needs of the resource. We've learned much since the original secretarial decision. You need to determine the proper flows and direct the Bureau of Reclamation to divert only those flows above that needed to protect Trinity fish resources.

A number of state, tribal, and federal members of the Klamath Fishery Management Council will be forwarding position statements and recommendations to you concerning the needed water flows.

Please understand that the difference, between normal Trinity flows and "critical dry year" flows, of up to 200,000 acre-feet will be very small in CVP carryover storage for next year. But the difference could be immense for the Trinity River fish.

Thank you for your prompt attention on this issue.

Sincerely,

E C Fullerton

E.C. Fullerton, Chairman
Klamath Fishery Management Council